SD
11
.A1
N55
1990

INTERMOUNTAIN REGION ANNUAL FIRE REPORT

1990

United States
Department of
Agriculture

Forest
Service

**Intermountain
Region**

Ogden, Utah

INTERMOUNTAIN REGION
1990
FIRE REPORT

PREPARED BY: Mary Spencer
MARY SPENCER
REGIONAL FIRE DISPATCHER

REVIEWED BY: Clee B. Pearson
CLEE PEARSON
ASST. REGIONAL COORDINATOR

REVIEWED BY: William Price
BILL PRICE
REGIONAL COORDINATOR

APPROVED BY: Ron Bell
RON BELL
ACTING DIRECTOR
AVIATION AND FIRE MANAGEMENT

FOREWORD

Hot, dry conditions prevailed throughout the Intermountain Region as it entered its fifth consecutive year of drought. The apparent potential for a severe fire season was tempered by early preparation, aggressive initial attacks and timely rains.

Although total number of fires was high compared with other years, the majority of fires never reached above 10 acres. Those that did were few but powerful. The Saval Fire, which occurred August 8, burned 13,400 acres and 3,570 acres were on the Humboldt National Forest. The day before, a 13,785-acre blaze raged on the Sawtooth--its origin, a catalytic converter. A smaller, but equally disastrous fire occurred on State land near Midway, Utah, on August 26. Although its size, 2,970 acres, was not remarkable, its rate of destruction was. It claimed 2 lives and 18 homes and threatened 200 other homes before firefighters brought it under control August 29.

Lightning continued to be the main ignition source causing 1,031 (or nearly 80 percent) of the Region's fires. Only 4 other years since 1930 have topped this number. Human irresponsibility accounted for 256 fires--just one more than last year's total; abandoned campfires again were blamed for most. And arson, unfortunately, was on the rise with 26 reported cases--1989 had only 8. Though total arson incidents were fewer than campfire incidents, the number of acres burned from arson was 28 times that burned by campfires. This problem was particularly pronounced on the Uinta National Forest where suspect(s) are yet to be found.

By season's end, 1,289 fires had occurred burning 35,915 acres of Forest lands. Excluding 1988 (during which over 550,000 acres burned), 1990, despite its high fire-frequency rate, was well below the 1985-1989 regional average of 123,402 acres burned. In the last 60 years of firefighting, only 6 years have experienced greater fire occurrences than 1990.

Prevention was a powerful tool used this year, and it effectively minimized what could have been an explosive fire season. Many Forests acted early in the season training additional emergency crews, requesting extra fire personnel and increasing fire-prevention awareness campaigns. Added help came from the increased severity funding some Forests received. When the fire season started, crews, ready and waiting, performed aggressive initital attacks which kept the number of acres burned at a minimum. Timely rain during an otherwise dry year also helped fire suppression efforts.

Lastly, Region 4's 1990 safety record was flawless. (The two deaths occuring at Midway were county workers). One large fire in Idaho, the Porter Creek, had 300 people working more than 5 days in rugged, steep country. That no accidents occurred there or elsewhere is a record deserving of praise.

CUMULATIVE FIRE REPORT

REGION 4

PERIOD:01/01/90 - 12/31/90

NUMBER OF FIRES

ACRES BURNED

SIZE CLASS (ACRES)	LIGHT NING	PERSON CAUSED	TOTAL FIRES	NATIONAL FOREST	OTHER INSIDE	TOTAL ACRES
A (.25 OR LESS)	709	173	882	119	4	123
B (.26 - 9)	269	61	330	459	48	507
C (10 - 99)	25	12	37	959	140	1,099
D (100 - 299)	11	5	16	2,330	156	2,486
E (300 - 999)	10	2	12	5,378	95	5,473
F (1000 - 4999)	3	1	4	7,510	0	7,510
G (5000 +)	2	1	3	15,305	1,350	16,655
P (PRESC. FIRE)	2	3	8	1,052	1,009	2,062
TOTAL	1,031	258	1,289	33,112	2,803	35,915

STATISTICAL CAUSE	NUMBER FIRES	ACRES BURNED
LIGHTNING	1,031	22,822
EQUIPMENT USE	12	7,884
SMOKING	29	528
CAMPFIRE	117	59
DEBRIS BURNING	21	239
RAILROAD	2	219
ARSON	26	1,666
CHILDREN	10	1
MISCELLANEOUS	41	2,497
TOTAL	1,289	35,915

1990 FIRE AND WEATHER SUMMARY

ASHLEY NATIONAL FOREST

The 1990 fire season on the Ashley National Forest closed with 40% of the average number of fire starts (24 total) and approximately 20% of the average yearly acres burned (149.5 total). Despite below average precipitation, the forest showed a 10% improvement from last year.

Drought conditions which continued locally through the winter contributed to an early summer fire season. The first fire was lightning caused and started on April 16th. Once controlled, most lightning-caused fires were less than 1 acre, although two such fires reached 4 and 5 acres due mostly to their steep, remote locations. The largest fire to occur on the forest was human caused and reached 130 acres before being controlled. This fire was an escaped control burn on the Flaming Gorge District, and 80 of the 130 acres were inside the project boundaries.

BOISE NATIONAL FOREST

The Boise National Forest once again experienced drought and an active fire season. As a result, they requested severity money, and 58 extra fire suppression personnel and 35 AD emergency fire fighters were also trained. Additionally, 24 crews were brought in for initial attack during lightning storms.

The Boise National Forest was host to four overhead teams during the summer and had 4 project fires: Mormon Creek - 440 acres, Porter Creek - 986 acres, Eagle Creek - 553 acres and Badger Creek - 1,500 acres. Together, these 4 fires totalled 3,479 and were included in the total acres burned figure of 4,677.

Firefighters accessed 27% of all fires by helicopter, 19% by smokejumping, 25% by engine and 29% by foot or other vehicle.

The contract retardant base pumped 250,000 gallons of retardant that was delivered to fires on the Boise National Forest, Payette National Forest, State of Idaho and Bureau of Land Management lands.

BRIDGER-TETON NATIONAL FOREST

The Bridger-Teton National Forest experienced a near-normal fire season even though the winter snowfall was subnormal. January and February had above average snowfall, but by the end of March, it was clear that unless substantial snowfall occurred in April, the extreme drought in western Wyoming would continue. By the end of April there remained

only a trace of snow on Snow King Mountain. The spring weather patterns didn't produce the typically heavy rains, so by late June the energy release components were nearing the 90th percentile at two stations and between the 90th and 97th percentile at a third station. Some heavy rains during July and aggressive initial attacks helped avert what could have been a devastating fire season. As the season progressed, a more typical pattern of heightened fire activity developed during August and September. Although weather conditions during the fire season were near normal, the forest remained in moderate to extreme drought conditions. Yearly moisture helped slow fire spread, but they didn't restore soil moisture or decrease 1000-hour fuel-moisture deficiencies. Actual measurements by oven drying in September and early October of 1000-hour fuels indicated moistures were between 8 and 17%.

According to the Palmer Drought Index, the Yellowstone drainage has experienced moderate to severe drought since 1983 and the Snake, Green and Bear River drainages since 1987; Western Wyoming is still experiencing moderate to extreme drought conditions and needs 1.1 to 8.3 inches of precipitation above normal to return the indexes to zero.

The dead woody fuels were extremely dry during the fire season and the 1000-hour timelag fuel readings were, again, some of the lowest ever recorded for the forest. Fortunately, the grass/forbs remained green and did not carry fire, even with the high winds, until mid-August, so ground-spread of fire was limited to the woody fuels in the tree stands until mid-season. Then, the grasses carried fire if they were exposed to heating or high wind. As a result, fire grew by spotting unless the dead, down woody fuel was continuous enough to allow ground fires to spread.

The first lightning fire was in July and the last one in September with 58 fires in between. Like last year, the forest experienced multiple fire starts due to lightning. This, at times, completely exhausted our initial attack capabilities.

The number of fires for 1990 was 44% above the 10-year average, but acreage burned was 62% below the 10-year average (excluding the 1988 fire season). The forest also experienced 3 project fires that required overhead teams.

The spring prescribed fire program (management planned ignitions),begun in April, was fairly successful; the fall program for fuels reduction started later than normal and despite late fall rains and early snow, the Bridger-Teton experienced extreme fire behavior because of low fuel moistures in the larger fuels. Radiation across tractor-constructed fire lines and a brief spotting incident created further control problems. Extreme fire behavior was also observed on one unit which had been closed to burning the previous week due to 4 to 6 inches of snow. In this situation, another broadcast slash burn covered with 2 inches of snow ignited both the green and year-old slash. Because of the dry conditions, several hundred acres of slash scheduled to be broadcast burned were not ignited.

This was the ninth year for the Interagency Helitack operation, and it again was a seven-person crew that provided initial attack and support to the project fires. The helicopter

and crew had off-forest dispatches to the Challis N.F., Rock Springs BLM and the Targhee NF.

CARIBOU NATIONAL FOREST

The Caribou experienced below normal precipitation amounts and above normal condition classes resulting in some of the highest NFDRS indicies recorded in the last five years. The Forest had 21 fires with a total of 487 acres burned, but the only fire of consequence was the Red Rock fire which reached project size.

The strength of the Gateway Interagency Fire Front continues to increase in both terms of cooperation and from a mutual assistance stand point.

The Caribou was basically in a support mode, beginning in mid June, for major fires elsewhere.

CHALLIS NATIONAL FOREST

With only 1.79 inches of precipitation from November through April, the Challis was preparing for a severe fire season, but from May through August, it received 5.56 inches of rain thus reducing the high rate of fire spread the forest experienced the two previous fire seasons.

Although fire occurrence was above normal with 67 fires (the 1970-79 yearly average was 47.3), acreage burned was below average at 299 acres (1970-79 yearly average was 451.6). Of the 67 fires, 56 were caused by lightning. While the forest was lucky in having observed lightning on only 16 days, two of these lightning storms, each occurring in August, were responsible for starting 37 (or nearly 70% of lightning-caused) fires. Person-caused fires were down from th 15.8 average to 11.

The Frank Church Wilderness had 28 fires that burned 63 acres. All fires were suppressed. Non-wilderness lands, including BLM lands protected by the Forest Service, had a total of 37 fires. Of these, the Big Creek fire escaped initial attack and was managed by a Region 4 National Incident Team for which Steve Raddatz was the Incident Commander.

For the third year in a row, the Forest Management Team was assigned (twice) the task of managing the Forest as a complex, (Challis Complex), with Misc. ABC fires.

The Forest was also a supporter of off-forest dispatches using 83 people for a total of 403 person days off forest. The Forest helicopter also spent 37 days on off-forest assignments.

DIXIE NATIONAL FOREST

The drought continued for southwestern Utah with little or no snow pack and sparce spring rains. To prepare in advance for what looked like another busy fire season, the Dixie asked for and received severity money, developed plans among the local federal cooperators, organized crews and equipment earlier than usual, and notified Color Country crews.

As expected, the season was busy. The largest fires occurred in May, but with assistance from the Park Service and BLM cooperators, they were readily suppressed. Dry conditions continued throughout the fire season, but light rainfall at crucial times aided firefighting efforts.

Because of their early preparation and aggressive initial attacks, Dixie's fire season, although action-filled, did not not produce any large fires.

FISHLAKE NATIONAL FOREST

Entering its fourth year of drought, the Fishlake, as expected, had an active fire season (but not as severe as was anticipated). The forest had 66 fires, one of them a project fire in mid-July. This was a slight increase over the 61 fires of 1989, but not far from the 5-year average of 62.

Four fires occurred during May and June, one of them started by a person at a high school graduation party. In July, lightning-caused fires happened almost every other day until early September. The largest multiple-start storm was on July 23rd when 15 fires were reported from the south end of the forest to the north end. Temperatures during the summer were in the low 100's with resulting relative humidities in the single digits and fairly consistent winds at 10 to 15 mph. This year saw more days with cloud cover than the past few years, but little rain materialized.

HUMBOLDT NATIONAL FOREST

The Humboldt had an average fire season with its first fire on June 12th and its last October 12th. Total number of fires equalled 24; acreage burned on National Forest lands was 4,111.8 (the Saval fire on Mountain City Ranger District claimed 3,570 of those acres). Of the 24 fires, 5 were person-caused covering 162.2 acres, and 19 were lightning started covering 3,951.6 acres. The majority of activity occurred on the Mountain City District where 7 fires and 3,659 acres burned.

One period of multiple starts by lightning beginning August 8th taxed the resources of the Humboldt and its cooperators. It was during this period that the Saval fire exploded burning 13,400 acres (Forest, State and BLM lands). The Jarret Canyon Mine of Independence Mining Company was again affected by wildland fire, and the Bear Creek Summit

(70-acre Forest Service fire) and Murphy Creek (350 acres just outside Forest Service boundary) fires also started the same day.

Beginning in June temperatures were above the normal annual percent of precipitation. For the remainder of the season through October the precipitation gradually decreased but was near 80% of normal by October for most of the Forest. Temperatures remained mild with only 3 days of 100 degree weather. The potential existed for a long, hard fire season due to the good spring growth and temperatures remaining warm in the Fall.

MANTI-LASAL NATIONAL FOREST

Like all forest regionwide, drought persisted on the Manti-Lasal National Forest; however the 1990 fire season was relatively subdued. Thirty fires burned 30 acres. Of these figures, 1 fire was person-caused and responsible for 0.5 acre; the rest came from lightning.

The forest provided support to Region 4 fires with 40 overhead miscellaneous support people, 60 unemployed persons from Carbon and Emery Counties as AD casuals (camp crews) and a Type II hand crew was dispatched to fires in other Utah and Idaho National Forests.

A total of 1000 acres of prescribed burning was accomplished on the Forest in 1990.

PAYETTE NATIONAL FOREST

The 6-year drought coupled with forest insect and disease mortality has changed fire statistics and management strategies on the Payette. Additional stress imposed on old-growth timber by the drought initiates and perpetuates beetle activity. As a result, beetle-infested areas have increased dramatically over the last few years. To demonstrate this point, from 1970-79, the forest averaged 149 fires and 543 acres burned. In 1985, west-central Idaho entered a drought; statistics for the period 1985-1990 averaged 220 fires and 45,794 acres burned.

Changing fire management strategies has helped overcome the problems created by the combined forces of drought and beetles. The 1990 statistics show 193 fires for 8,481 acres.

The Payette employed 1,747 personnel in fire suppression including 49 crews brought to the Forest to assist with two fire complexes and other miscellaneous fires. The McCall Logistics Support Organization supported multiple fires and one Class I Overhead Team on the Yellowpine Complex. Also, the Wilderness Complex was established to manage fires in the Frank Church River of No Return Wilderness area. The Forest utilized 13 helicopters, including 2 Forest contract ships each of which flew over 250 hours this year. We hosted 7 different airtankers which flew on 51 separate fires and delivered 324,076 gallons of retardant from the McCall tanker base.

SALMON NATIONAL FOREST

The winter of 1990 had above normal temperatures with below normal precipitation and snowpack totals much like the pattern throughout the region. From May to October, precipitation levels see-sawed going ranging from 81% above average in July to 97% below in October. Fortunately, moisture levels were above normal for the hottest part of the summer in July and August. This helped keep fires small. Dry conditions returned after August, though.

Weather aside, the fire season was normal with 55 fires and 636 acres burned (an 86% decrease from the last 30-year average of 5,274).

SAWTOOTH NATIONAL FOREST

The forest experienced a moderate drought with severe fire weather and fuel conditions and normal lightning occurrence. The fire season officially ended, with light snow and rain, on October 21, with the last fire (campfire related) occurring on October 14.

Number of fires and acres burned were up this year because of the dry season and storm activity. (Ten fire-causing storms occurred over the summer.) We hade a more average year for lightning and an encouraging sign with fewer person-caused fires. In all, 49 fires burned 14,370 acres of which 8,151 were on NFS lands. Despite the low occurrence of person-caused fires, one contributed 13,785 acres to the total figure. This fire started on BLM land and burned onto the forest.

Low fire occurrence was attributed partly to increased prevention strategies. Due to unprecedented amounts of severity funding, we were able to send more prevention personnel to the field.

TARGHEE NATIONAL FOREST

The Targhee, too, did not escape the drought. Below-normal moisture levels for the year created dry conditions throughout the forest. In March, snowpack was estimated at 65% of normal. In early June, there was a 5" - 10" moisture deficit across the Forest. Thousand hours were 9 in the North and 15 in the South - normal range is 17-21 across the Forest at the start of fire season.

During the regular fire season months of June through September, Swan Valley recorded the least amount of precipitation with 2.34 inches, much below normal for this station. The Island park Station was also below normal again with 1.52 inches less of precipitation than recorded in the previously dry year. Island Park had 3.32 inches, Dubois 3.74 inches and our RAWS station 2.95 inches of precipitation.

Fire fuels started to cure early until mid June rains slowed them to their normal time frame. Thousand hour fuels remained below normal for the duration of the fire season.

Thunderstorm occurrence was above normal this year with 34 days of observed LAL's of 3 or greater. (The five-year average is 29.2.).

The Targhee National Forest had 19 human-caused fires (about 20% less than our five-year base-period average. The most common cause for human-caused fires is campfires followed by debris burning and equipment use.

TOIYABE NATIONAL FOREST

This winter marked the fourth year of well below-normal precipitation over the Toiyabe Forest. Rainfall for the winter months through April 1st measured a scant 60% or less along the eastern Sierra Nevada and nearly the entire central Nevada districts. A warm, early spring virtually eliminated the winter snowpack. The Lake Tahoe Basin had 4% of normal snow-water content on January 1st.

The summer prospects for a severe fire season were confirmed early by a wildfire near Genoa in April in which the fire behavior reflected conditions normally seen in June. March and April were unusually warm with March almost 4-5 degrees above normal and April 5-8 degrees above. May and June were cooler, and July brought the inevitable lightning activity which went through the last week of September.

Person-caused fires are still occurring adding to what already has been a record-setting year of 231 total fires. The old record, set in 1987, was 171. Aggressive initial attack kept acreage burned to well below normal.

UINTA NATIONAL FOREST

Because of its fourth consecutive season of drought, the fuels on the Uinta were very dry at the season's start. This was demonstrated by the occurrence of a lightning strike early in April in which the affected tree burned in the middle of a snowfield. A fire near the season's end also demonstrated this when a powerline fell and the resulting arc started many small fires in the adjacent vegetation. Damp grasses and leaves from an earlier rain stopped the spread of the fires and limited the size of the area burned. Larger fuels such as brush and small trees, however, burned completely as the fuels were still extremely dry.

The Pleasant Grove Fire Weather Station recorded 29 days with fuel moistures of 4%, 34 days of 3%, and one day of 2%; fuel moistures of 2 and 3% are normally rare at this station.

Many of the fires exhibited extreme fire behavior; however, the most extreme example occurred on the Labor Day weekend with the Wasatch Mountain fire near Midway, Utah. The fire was not on the Uinta Forest, but it burned within a half-mile of the Pleasant Grove Ranger District. The dry conditions coupled with extreme winds on the day of the fire caused it to run 3-4 miles in less than 2 hours. The firestorm burned the vegetation clean in a short time.

Arson activity was also evident on the Uinta National Forest, with most of the starts occurring on the Pleasant Grove Ranger District. Prompt action by forest and city departments, along with help in observation, reporting, and suppression by the general public aided in keeping the damage and acreage burned by these fires to a minimum. Presently, evidence has been accumulated and a mode of operation established, but a definite suspect has not been found. An investigation is continuing.

The districts conducted prevention activities this year in the form of the usual parade appearances of Smokey and Woodsey. In addition, Smokey was included in local rodeos. Fire prevention programs in the local schools during September and October were able to provide CFFP materials as well. A wildlife ethics training session, in which a large segment was on fire ecology, was held at Alpine School District's camp at Clear Cree, for 30 teachers. The purpose was to make teachers aware of new information and resources.

Additional severity prevention patrols were utilized during the July 4 and 24th holiday seasons and during times of high arson activity. This effort seemed to curb the fire occurrences temporarily.

WASATCH-CACHE NATIONAL FOREST

Compared to 47 fires during the 1989 season, the Wasatch-Cache had 41 fires that burned 4,335 acres compared to 1,164 acres burned in 1989. The first fire started March 24th. Elsewhere, the Bureau of Land Management, Salt Lake District, had a total of 18 fires which burned 1,427 acres. In 1989, they had 41 fires which burned 18,671 acres. The Division of State Lands and Forestry, Northern Area, had a total of 25 fires which burned 22,527 acres. In 1989 they had 22 fires which burned 9,575 acres.

The Big Hollow Fire of August 9 on the Salt Lake District burned 3,900 acres and was the largest fire on the Forest. A Class II Overhead Team was ordered, along with 4 crews and one Type III helicopter. The fire was called controlled on August 13.

The Wasatch Mountain Fire on state land which started August 26, burned a total of 2,970 acres and destroyed 18 homes and threatened 200 others. Two county employees were killed Sunday, August 28th. A Class II Overhead Team, 21 crews, 2 Type I,s, 2 Type II's, 2 Type III helicopters, and 3 airtankers worked the fire. Total personnnel reached 707. The fire was brought under control on August 29.

During the 184-day fire season, the temperature was 90 degrees or more 42 times and 100 degrees or better 14 times. The highest temperature was on August 9th when it reached 106 degrees. For the 5-month period beginning in June, the Ensign Weather Station recorded 2.31 inches of precipitation as compared to the normal 4.71 inches. Last year 1.32 inches of precipitation was recorded.

On July 1, Stage I Fire Restrictions were in effect on all National Forest Lands, Bureau of Land Management lands, and all state- or privately owned wildlands within the State of

Utah due to the dry conditions. The order was rescinded on October 13th because of cooler weather.

FIRE TRIVIA

. The Intermountain Region delivered 657,326 gallons of retardant this year--last year southern Idaho alone delivered over 1 million gallons.

. Smokey Bear II died in mid-August at the National Zoo. The original Smokey died in 1976.

COOPERATIVE EFFORTS

The **Ashley National Forest** has continued with the cooperative agreements with the Uinta Basin Fire Control (UBFC) agencies. These agencies include:
The Uinta/Ouray Indian Agency, Bureau of Land Management, Dinosaur National Monument, and Utah State Lands and Forestry (Uinta, Daggett, and Duchesne Counties

The Bureau of Land Management, State Lands and Forestry and the Ashley National Forest share responsibilities at the Uinta Basin Fire Center.

The agreement with the Rock Springs BLM, and the Flaming Gorge Ranger District, authorized initial attack action in the Little Mountain area. This agreement decreased the initial attack response time in the areas of high resource value timber.

Three agencies (FS,BLM and NPS) contributed to the Big Piney Interagency Helitack operation on the **Bridger-Teton National Forest.**

The **Challis National Forest,** Idaho Falls BLM, and the Salmon BLM have an agreement whereby fire suppression protection responsibility is exchanged on large areas of land. This season the Forest helped suppress six fires on BLM lands protected by the Forest Service. The BLM supported two fires. Agreements were held with local businesses, stores, service stations, restaurants, motels, aircraft. The Sheriff's covered night dispatch early in the season when dispatch closed.

Color Country Crews consisting of personnel from the **Dixie National Forest**, North Kiabab District of the Kiabab National Forest, Zion National Park, Bryce Canyon National Park, Glen Canyon National Recreation Area, and the Bureau of Land Management Districts (Cedar City and Arizona Strip) were dispatched to fires. In addition crews from the Navajo Nation were formed and the crew bosses were also full-time employees of the above agencies. The Alpine Hotshots worked fires in most of the western states as well as local fires.

Interagency cooperation has worked well at the **Fishlake National Forest** and the Richfield BLM. Each agency provided one Lead Dispatcher and one Assistant Dispatcher to the Richfield Interagency Dispatch organization. Through shared responsibilities, dedication to teamwork, and personal commitment, RIDO was highly efficient and productive. The result was high morale.

The Closest Forces agreement was extended to all agencies the BLM, Utah State Lands, Sevier County, and Millard County Volunteer Fire Departments contributed their help and hastened initial attack. The Forest reciprocated by providing initial attack services to State and County lands.

The Humboldt National Forest, Nevada Division of Forestry and Bureau of Land Management have successful mutual aid agreements for wildland fire suppression. The NDF conservation crew remains a valuable resource for fire suppression as well as project work.

The Elko Interagency Dispatch Center is functioning well Problems are handled at monthly meetings of the Coordinating Technical Group. The NDF hopes to have dispatchers working 24 hours per day within the next year.

All resource orders were channeled through the Nevada Coordination Center.

The Payette National Forest identified a potential for aircraft overload early in the season at the McCall Airport. They solicited the FAA to help manage the growing influx of fixed and rotor wing aircraft.

The Boise BLM aided in suppression of 8 fires on the Payette totaling 34 acres. The Forest supplied requests for smokejumpers, airtankers and crews on State of Idaho fires.

The Tri-Region agreement with regions 1,4, and 6 worked well in exchanging resources. Requests for smokejumpers and airtankers came direct to the Payette from the Nez Perce and Wallowa-Whitman National Forests. Thirteen out of Region fires were jumped from the McCall base and eleven fires received 42,416 gallons of retardant as part of the cooperative agreement.

Cooperation between the **Sawtooth National Forest** and the Shoshone and Burley BLM Districts continues to be excellent. A close working relationship with Shoshone BLM, including backup from their helicopter was helpful during the season as well as help with training, helitack and the Interagency Class II Team.

The Interagency Fire Control Center at West Yellowstone provided suppression personnel for thirteen of the fires on the **Targhee National Forest**. Smokejumpers remain a valuable initial attack resource for high country fires.

Unites States Sheep Experiment Station employees continue to work with the Dubois District in keeping their employees trained and available for local fire suppression.

The Idaho Falls BLM District and the Targhee NF combined efforts to train engine personnel. This combined training effort will expand and next year will encompass all of the Southeast Idaho agencies. Bureau of Land Management firefighters were dispatched on the Targhee Regular Crew for the first time.The combined dispatches worked well and plans to continue the effort have been made.

An Idaho Department of Corrections crew was formed this year from the St. Anthony work camp and was dispatchaed to eight fires in the Region.

Two Sierra Front Teams were again formed under the Incident Command System to function as Class II Teams. Team members came from the Toiyabe NF, BLM, Nevada Division of Forestry, Truckee Meadows Fire Department, Reno City Fire Department, East Fork Fire Protection District and Carson City Fire Department for fires along the Reno-Carson City Sierra Front.

The Eastlake Interagency Communication Center continued to provide dispatching and logistics service for its members which include the **Toiyabe National Forest**, Lake Tahoe Basin Management Unit R-5, Carson City BLM, and the Nevada Division of Forestry western area. This resulted in better utilization of the closes resource concept.

The Bridgeport Helicopter Program is interagency with the Bakersfield BLM. This ship was flown 169.5 hours for the season and continued its excellent safety record. At Las Vegas the Forest participated in an interagency helitack program with the Las Vegas District BLM, providing an assistant crew supervisor and two crew persons.

The cooperative effort among the Salt Lake City BLM, **Wasatch Cache National Forest**, National Weather Service, and the Division of State Lands and Forestry continued in 1990.

Fire Programs are put on locally for the local fire departments on Forest Service and State procedures in Wildland Fire Suppression. The Division of State Lands and Forestry did an excellent job last spring helping with instructors for the Annual Fire School.

The Division of State Lands and Forestry continued to provide a manager for the Interagency Fire Center and hopes to add a state person to help cover dispatch operations in the summer.

The Utah National Guard was used on the Wasatch Mountain Fire in Wasatch County.

Because of the Interagency cooperation three Class II Overhead Teams were available. The dispatch, coordination, and rotation of the teams were again handled by the Bureau of Land Management State Office.

In addition to the **Uinta National Forest** Fire academy training, two additional training sessions were held in cooperation with the Utah County Fire Marshall. In these sessions 70 people were trained including people from the Forest Service research station in Provo City and County volunteers. These trainees which included fire fighters from city departments, the Park Service, and Utah, Wasatch and Juab counties. This allowed the Uinta National Forest to send two crews into the national system and still maintain sufficient people to cover the local needs.

Orem City allowed some of their firefighters to work as trainees for fire overhead positions on some of the local fires. Orem and Provo have worked with the Forest Service

to allow their people to act as trainees. The ultimate goal is to have a fully qualified local overhead team.

The Mutual Aid Organization for Wasatch County produced a booklet and door knob flyer to help inform homeowners and developers on fire safety and making their summer homes safer.

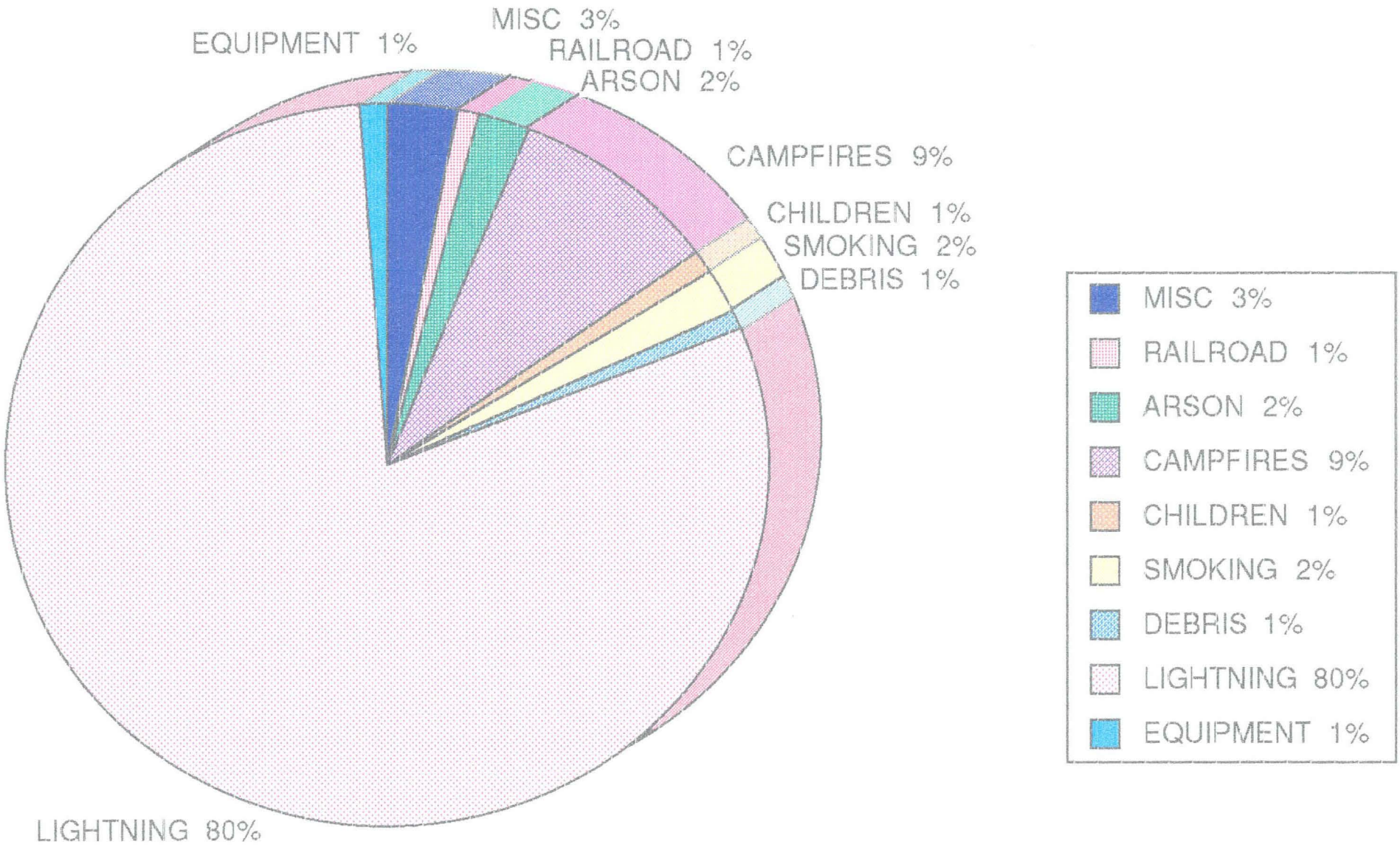
NUMBER OF WILDFIRES BY STATISTICAL CAUSE

			PERSON CAUSED								
Forest	ST	Lightning	Equip ment	Smok ing	Camp fire	Debris burn	Rail road	Arson	Child ren	Misc	Total
BOISE	ID	186	1	2	9	2	0	4	1	10	215
CARIBOU	ID	13	1	0	1	1	0	0	3	2	21
CHALLIS	ID	56	0	2	5	3	0	0	0	1	67
PAYETTE	ID	173	0	0	16	2	0	0	0	2	193
SALMON	ID	53	1	0	1	0	0	0	0	0	55
SAWTOOTH	ID	31	1	5	6	0	0	4	0	2	49
TARGHEE	ID	29	3	2	7	3	1	0	0	3	48
SUB-TOTAL	ID	541	7	11	45	11	1	8	4	20	648
HUMBOLDT	NV	19	1	0	1	0	0	2	0	1	24
TOIYABE	NV	189	1	7	23	2	1	0	2	5	230
SUB-TOTAL	NV	208	2	7	24	2	1	2	2	6	254
ASHLEY	UT	18	0	0	3	3	0	0	0	0	24
DIXIE	UT	61	1	3	6	3	0	2	1	0	77
FISHLAKE	UT	66	0	0	0	0	0	0	0	0	66
MANTI-LASAL	UT	30	0	0	0	0	0	0	0	0	30
UINTA	UT	29	0	0	9	0	0	12	3	5	58
WASATCH	UT	18	1	3	12	0	0	2	0	5	41
SUB-TOTAL	UT	222	2	6	30	6	0	16	4	10	296
BRIDGER-TETON	WY	60	1	5	18	2	0	0	0	5	91
SUB-TOTAL		60	1	5	18	2	0	0	0	5	91
TOTAL		1,031	12	29	117	21	2	26	10	41	1,289

NUMBER OF ACRES BURNED BY STATISTICAL CAUSE

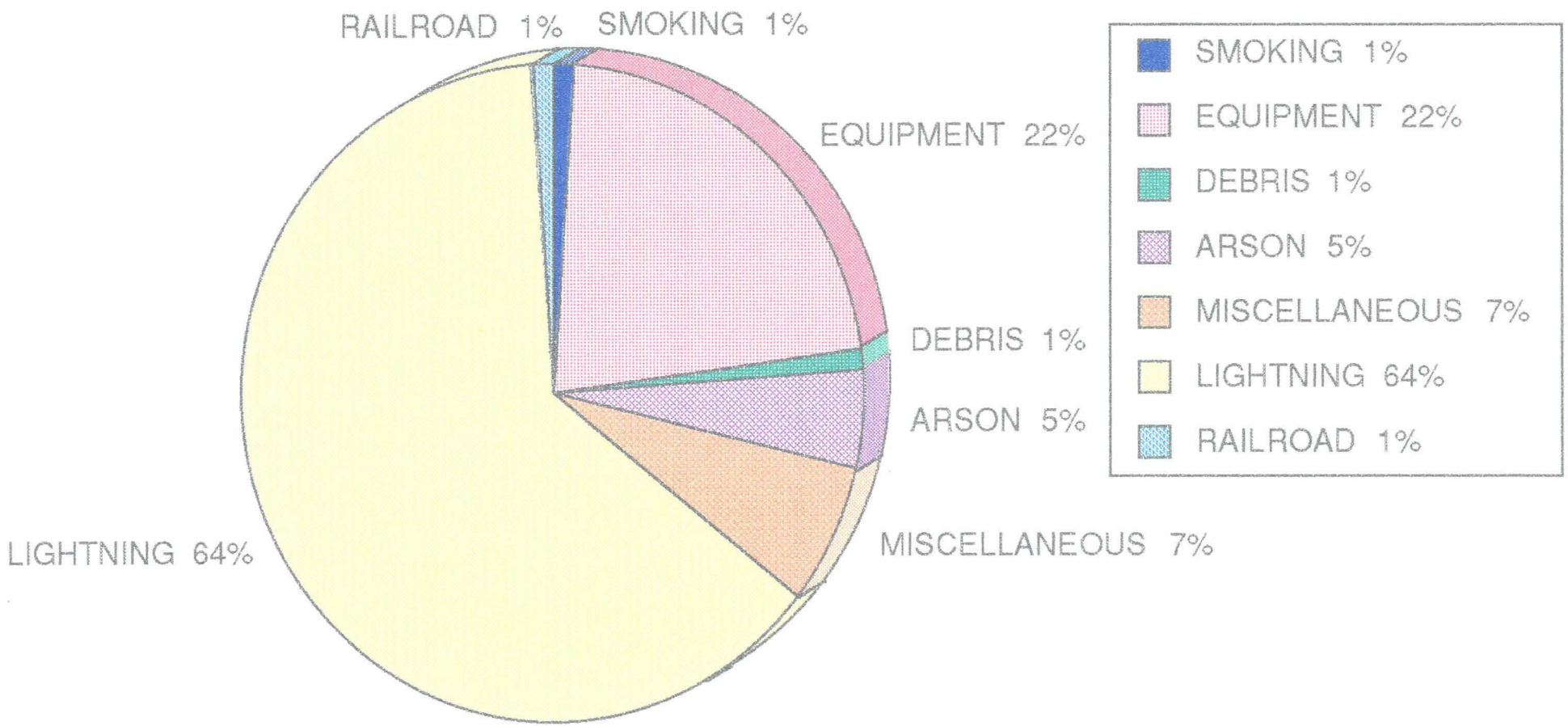
			PERSON CAUSED								
Forest	ST	Lightning	Equip ment	Smok ing	Camp fire	Debris burn	Rail road	Arson	Child ren	Misc	Total
BOISE	ID	1,100		1	3	4	0	1501	0	2,069	4678
CARIBOU	ID	478	5	0	1	0	0	0	0	3	487
CHALLIS	ID	32	0	266	1	1	0	0	0	0	300
PAYETTE	ID	8,459	0	0	21	1	0	0	0	1	8,482
SALMON	ID	635	0	0	1	0	0	0	0		636
SAWTOOTH	ID	92	7,875	175	8	0	0	1	0	0	8151
TARGHEE	ID	31	1	0	1	37	1	0	0	1	72
SUB-TOTAL	ID	10,827	7,881	442	36	43	1	1,502	0	2,074	22,806
HUMBOLDT	NV	4,262	2	0	0	0	0	160	0		4,424
TOIYABE	NV	1,278	0	1	2	1	219	0	0	7	1,508
SUB-TOTAL	NV	5,540	2	1	2	1	219	160	0	7	5,932
ASHLEY	UT	18		0	0	131	0	0	0		149
DIXIE	UT	572	0	81	1	45	0	0	0		699
FISHLAKE	UT	391		0	0	0	0	0	0	0	391
MANTI-LASAL	UT	31	0	0	0	0	0	0	0	0	31
UINTA	UT	305	0	0	1	0	0	3	1	1	311
WASATCH	UT	4,933	0	1	17	0	0	0	0	404	5,355
SUB-TOTAL	UT	6,250	0	82	19	176	0	3	1	405	6,936
BRIDGER-TETON	WY	203	0	3	4	20	0	0	0	11	241
SUB-TOTAL	WY	203	0	3	4	20	0	0	0	11	241
TOTAL		22,820	7,883	528	61	240	220	1,665	1	2,497	35,915

PERCENT OF 1990 FIRES BY CAUSE
1289 TOTAL FIRES

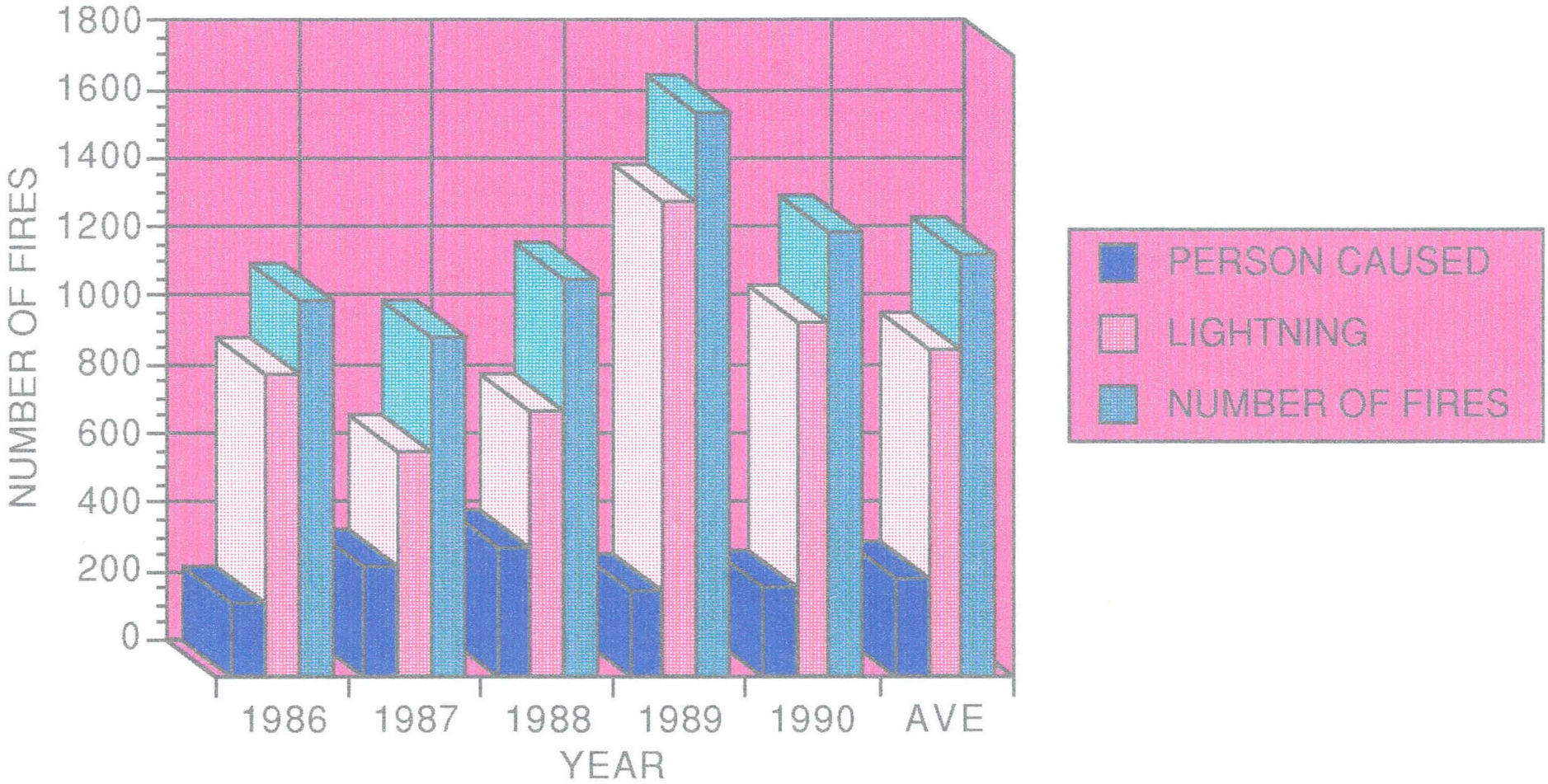


PERCENT of 1990 ACRES BURNED

35,915 TOTAL ACRES

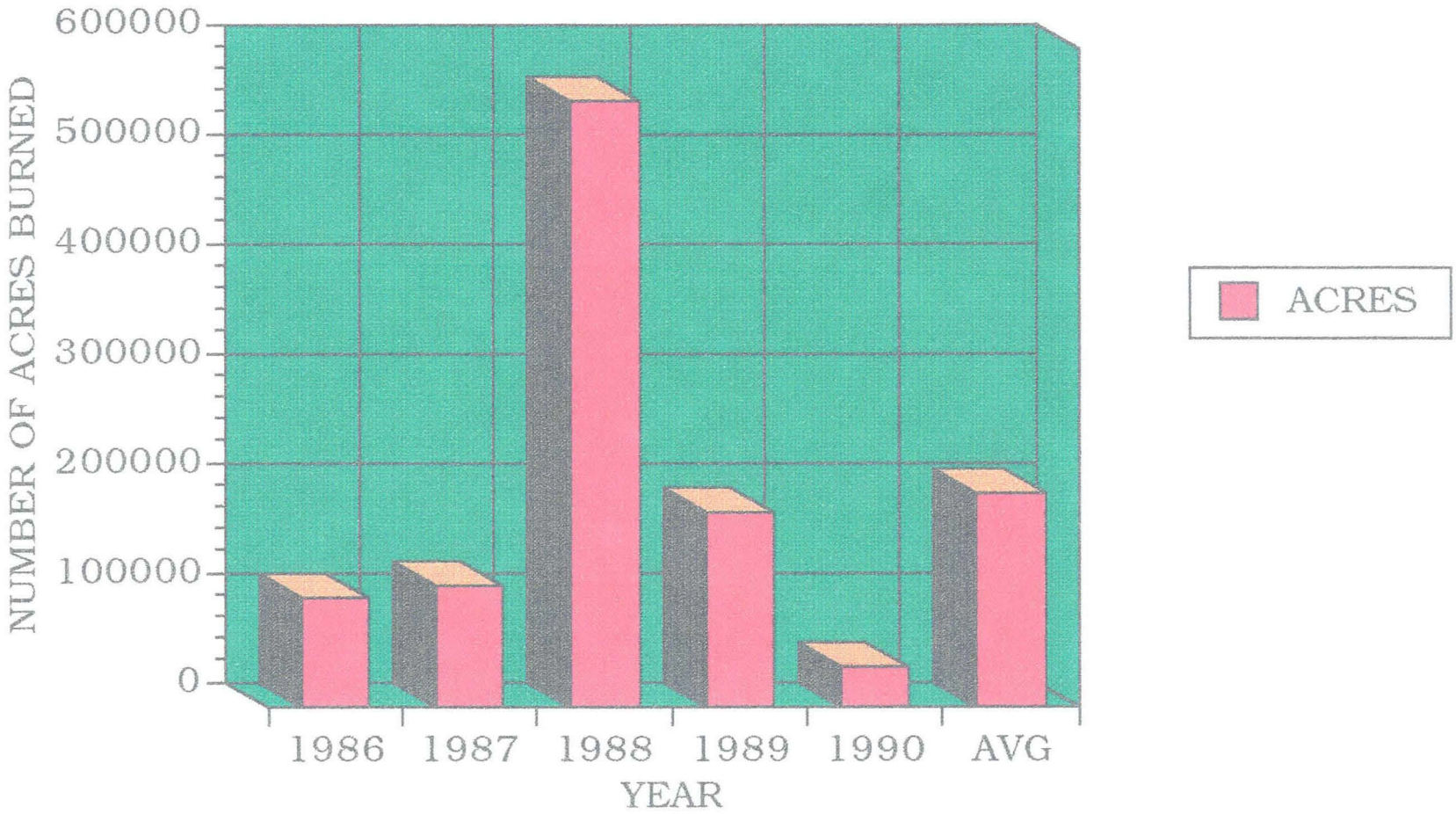


STATISTICAL FIRES
TOTAL AND 5 YEAR AVERAGE



STATISTICAL ACRES BURNED

ACRES BURNED AND 5 YEAR AVERAGE



SUMMARY - FY90 MAJOR FIRES

FIRE NAME	DATES	FOREST	FS &BLM COSTS	ACRES	COST/ACRE
Mormon Creek	7/17-7/23	Boise	$ 1,293,600	440	$ 2,940
Porter Creek	8/06-8/10	Boise	$ 638,500	986	$ 648
Eagle Creek	8/09-8/13	Boise	$ 516,600	553	$ 934
Badger Creek	8/16-8/21	Boise	$ 537,300	1,500	$ 358
Maki	8/07-8/18	Bridger-Teton	$ 164,700	43	$ 3,830
Hotfoot	8/12-8/18	Bridger-Teton	$ 986,000	127	$ 7,764
Big Creek	7/18-7/23	Challis	$ 537,200	265	$ 2,027
Killian	7/18-7/24	Fishlake	$ 459,600	177	$ 2,597
Yellow Pine Complex	8/11-8/18	Payette	$ 1,303,700	571	$ 2,283
Wilderness Complex	8/10-8/21	Payette	$ 233,200	7,486	$ 31
Indian Spring	8/09-8/13	Sawtooth	$ 328,400	14,065	$ 23
Evans Complex	8/04-8/08	Toiyabe	$ 300,300	916	$ 328
Buck Ridge Complex	8/11-8/15	Uinta	$ 354,300	297	$ 1,193

INSIDE FOREST SERVICE PROTECTION BOUNDARIES

PROTECTED BY THE FOREST SERVICE

State and Private Land
(Include county and municipal land)

Under Forest	State	Fee Basis	Offset Basis	Reimbursement Suppression Cost only	Without reimbursement	Other Federal Land	National Forest Land	Total	Mutual assistance agreements	National Forest Land Protected by others
ASHLEY	UTAH WYOMING				21,685 480		1,285,437 91,959	1,307,122 92,439	8,624	
BOISE	IDAHO	105,324	69,000			23,440	2,054,417	2,252,181		115,413
BRIDGER TETON	WYOMING			40,086			3,412,541	3,452,627		
CARIBOU	WYOMING UTAH IDAHO	22,153					6,948 6,955 1,081,128	6,948 6,955 1,103,281		
CHALLIS	IDAHO	9,012			8,328		2,514,974	2,532,314		
DIXIE	UTAH						1,884,468	1,884,468	83,444	
FISH-LAKE	UTAH						1,424,479	1,424,479		
HUMBOLDT	NEVADA				143,102		1,406,842	1,549,944	97,010	1,068,143
MANTI LASAL	UTAH COLORADO			79,619		640	1,307,188 27,105	1,387,447 27,105		32,000
PAYETTE	IDAHO	142,663	64,033			49,709	2,324,466	2,580,871	147,575	
SALMON	IDAHO	12,707				132,480	1,358,592	1,503,779		412,432
SAWTOOTH	IDAHO UTAH	10,850	8,591		20,867		2,067,608 63,703	2,099,325 72,294		3,680
TARGHEE	IDAHO WYOMING					18,235	1,516,717 331,249	1,534,952 331,249	50,516 2,440	
TOIYABE	CALIF NEVADA	134,264			14,730	391	641,806 3,217,994	776,070 3,233,115		78,046
UINTA	UTAH		5,784				341,916	347,700		
WASATCH CACHE	UTAH WYOMING	5,487	25,690		31,493 420	178,000	1,260,150 37,762	1,500,820 38,182		56,085
TOTALS		442,460	173,098	119,705	241,105	402,895	29,666,404	31,045,667	389,609	1,765,799

IDAHO FOREST SERVICE PROTECTION BOUNDARIES

PROTECTED BY THE FOREST SERVICE

State and Private Land
(Include county and municipal land)

Under Forest	State	Fee Basis	Offset Basis	Reimbursement Suppression Cost only	Without reimbursement	Other Federal Land	National Forest Land	Total	Mutual assistance agreements	National Forest Land Protected by others
BOISE	IDAHO	105,324	69,000			23,440	2,054,417	2,252,181		115,413
CARIBOU	IDAHO	22,153					1,081,128	1,103,281		
CHALLIS	IDAHO	9,012			8,328		2,514,974	2,532,314		
PAYETTE	IDAHO	142,663	64,033			49,709	2,324,466	2,580,871	147,575	
SALMON	IDAHO	12,707				132,480	1,358,592	1,503,779		412,432
SAWTOOTH	IDAHO	10,850			20,867		2,067,608	2,099,325		
TARGHEE	IDAHO					18,235	1,516,717	1,534,952	50,516	
TOTALS		302,709	133,033		29,195	223,864	12,917,902	13,606,703	198,091	527,845

NEVADA FOREST SERVICE PROTECTION BOUNDARIES

PROTECTED BY THE FOREST SERVICE

State and Private Land
(Include county and municipal land)

Under Forest	State	Fee Basis	Offset Basis	Reimbursement Sup pression Cost only	Without reimbursement	Other Federal Land	National Forest Land	Total	Mutual assist-ance agree-ments	National Forest Land Protected by others
HUMBOLDT	NEVADA				143,102		1,406,842	1,549,944	97,010	1,068,143
TOIYABE	NEVADA				14,730	391	3,217,994	3,233,115		78,046
TOTALS					157,832	391	4,624,836	4,783,059	97,010	1,146,189

CALIF FOREST SERVICE PROTECTION BOUNDARIES

PROTECTED BY THE FOREST SERVICE

State and Private Land
(Include county and municipal land)

Under Forest	State	Fee Basis	Offset Basis	Reimbursement Sup pression Cost only	Without reimbursement	Other Federal Land	National Forest Land	Total	Mutual assist-ance agree-ments	National Forest Land Protected by others
TOIYABE	CALIF	134,264					641,806	776,070		
TOTALS		134,264					641,806	776,070		

UTAH FOREST SERVICE PROTECTION BOUNDARIES

PROTECTED BY THE FOREST SERVICE

State and Private Land
(Include county and municipal land)

Under Forest	State	Fee Basis	Offset Basis	Reimbursement Suppression Cost only	Without reimbursement	Other Federal Land	National Forest Land	Total	Mutual assistance agreements	National Forest Land Protected by others
ASHLEY	UTAH				21,685		1,285,437	1,307,122		
CARIBOU	UTAH						6,955	6,955		
DIXIE	UTAH						1,884,468	1,884,468	83,444	
FISH-LAKE	UTAH						1,424,479	1,424,479		
MANTI LASAL	UTAH			79,619		640	1,307,188	1,387,447		32,000
SAW-TOOTH	UTAH		8,591				63,703	72,294		3,680
UINTA	UTAH		5,784				341,916	347,700		
WASATCH CACHE	UTAH	5,487	25,690		31,493	178,000	1,260,150	1,500,820		56,085
TOTALS	UTAH	5,487	40,065	79,619	53,178	178,640	7,574,296	7,931,285	83,444	91,765

WYOMING FOREST SERVICE PROTECTION BOUNDARIES

PROTECTED BY THE FOREST SERVICE

State and Private Land
(Include county and municipal land)

Under Forest	State	Fee Basis	Offset Basis	Reimbursement Suppression Cost only	Without reimbursement	Other Federal Land	National Forest Land	Total	Mutual assistance agreements	National Forest Land Protected by others
ASHLEY	WYOMING				480		91,959	92,439	8,624	
BRIDGER TETON	WYOMING			40,086			3,412,541	3,452,627		
CARIBOU	WYOMING						6,948	6,948		
TARGHEE	WYOMING						331,249	331,249	2,440	
WASATCH CACHE	WYOMING				420		37,762	38,182		
TOTALS	WYOMING			40,086	900		3,880,459	3,921,445	11,064	

UTAH FIRE WEATHER

After several years of general drought conditions and the 1989/1990 season looking as if it would be dry again, some heavy mountain snow in January brought hopes of a return to wetter conditions for the early fire season. Unfortunately the trend did not continue, and the winter/spring seasons ended with below normal precipitation totals for most of Utah. Some areas of the state did better than others. The northern mountains actually fared quite well, while all the valleys were quite dry. Hardest hit was Southeast Utah where it was extremely dry, even for that region.

Most notable during the summer and early fall was the marked lack of traditional "monsoon" convection. Mid to late July has been considered the usual beginning of this seasonal weather pattern, but its onset this year was gradual and not marked by the typically distinct sharp increases in moisture and thunderstorms. In fact, considering the rest of the summer and early fall seasons, the monsoon never really did become well established with monsoonal episodes remaining quite sporadic. This had two significant effects: 1) fuel conditions remained very dry in many areas: 2) overall, it was likely a less than average number of lightning caused fires were started due to fewer thunderstorms.

Late fall conditions remained near to below normal in the precipitation department for much of Utah, and there does not seem to have been enough Fall rain to help soils and fuels recover much moisture.

IDAHO FIRE WEATHER

The winter of 1989-1990 began on a dry note as little precipitation fell during November and December. Pocatello recorded it's driest December on record and Challis had only .07 of an inch for the two month period. Precipitation totals improved during January, February and March but were still generally below normal. Snowpacks at the end of March were only 60-80% of normal. Obviously, the drought remained intact and the prospects for another severe fire season seemed very good. However, the precipitation that should have fallen during the winter finally arrived the later part of April and May. Lowman recorded over 10 inches of rain during April and May and McCall nearly 7 inches. Boise set a rainfall record in May with 4.07 inches. Although this precipitation didn't end the drought, it significantly moderated the severity of the drought.

The first half of June was cool and damp, but the last half turned hot and dry as strong high pressure aloft built over the Western States. July was characterized by periods of hot, dry weather followed by periods of cooler temperatures and showers. July was characterized by periods of hot, dry weather followed by periods of cooler temperatures and showers. Locally heavy rain, up to .82 of an inch at McCall, fell in central Idaho and western Wyoming the 25th. The first significant bout with lightning occurred July 30th resulting in over 70 fires in southeast Oregon and southwest and central Idaho.

The fire season peaked the first 10 days of August as temperatures soared above 100 degrees and relative humidities plunged below 10%. By mid-August, very wet and cool weather moved in from the Pacific Ocean and the worst part of the fire season was over.

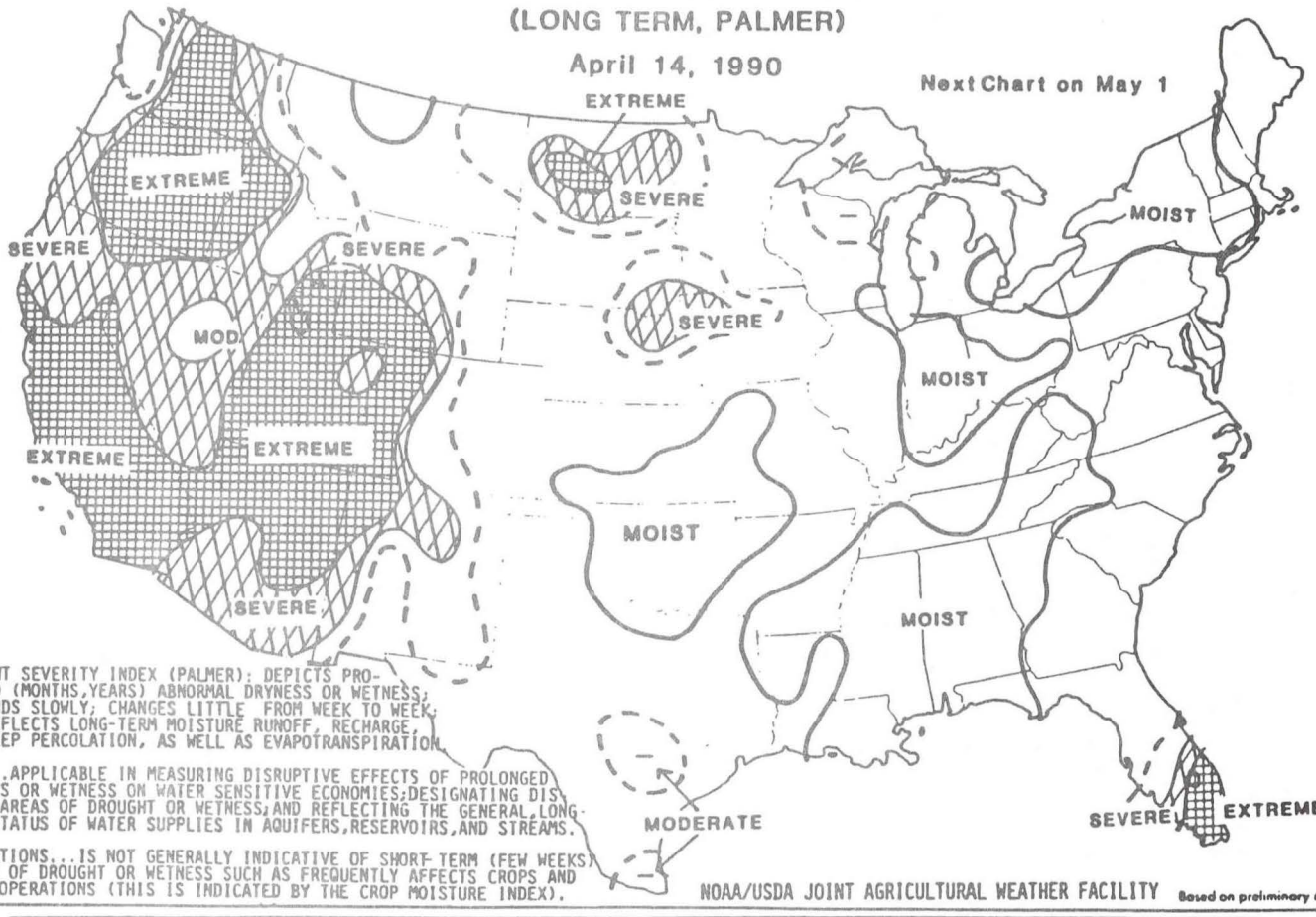
September and October were warmer and drier than normal. The dry fall weather did restrict prescribed burning as the larger fuels remained too dry to safely burn.

DROUGHT SEVERITY

(LONG TERM, PALMER)

April 14, 1990

Next Chart on May 1



DROUGHT SEVERITY INDEX (PALMER): DEPICTS PROLONGED (MONTHS,YEARS) ABNORMAL DRYNESS OR WETNESS; RESPONDS SLOWLY; CHANGES LITTLE FROM WEEK TO WEEK; AND REFLECTS LONG-TERM MOISTURE RUNOFF, RECHARGE, AND DEEP PERCOLATION, AS WELL AS EVAPOTRANSPIRATION.

USES...APPLICABLE IN MEASURING DISRUPTIVE EFFECTS OF PROLONGED DRYNESS OR WETNESS ON WATER SENSITIVE ECONOMIES;DESIGNATING DISASTER AREAS OF DROUGHT OR WETNESS;AND REFLECTING THE GENERAL,LONG-TERM STATUS OF WATER SUPPLIES IN AQUIFERS,RESERVOIRS,AND STREAMS.

LIMITATIONS...IS NOT GENERALLY INDICATIVE OF SHORT-TERM (FEW WEEKS) STATUS OF DROUGHT OR WETNESS SUCH AS FREQUENTLY AFFECTS CROPS AND FIELD OPERATIONS (THIS IS INDICATED BY THE CROP MOISTURE INDEX).

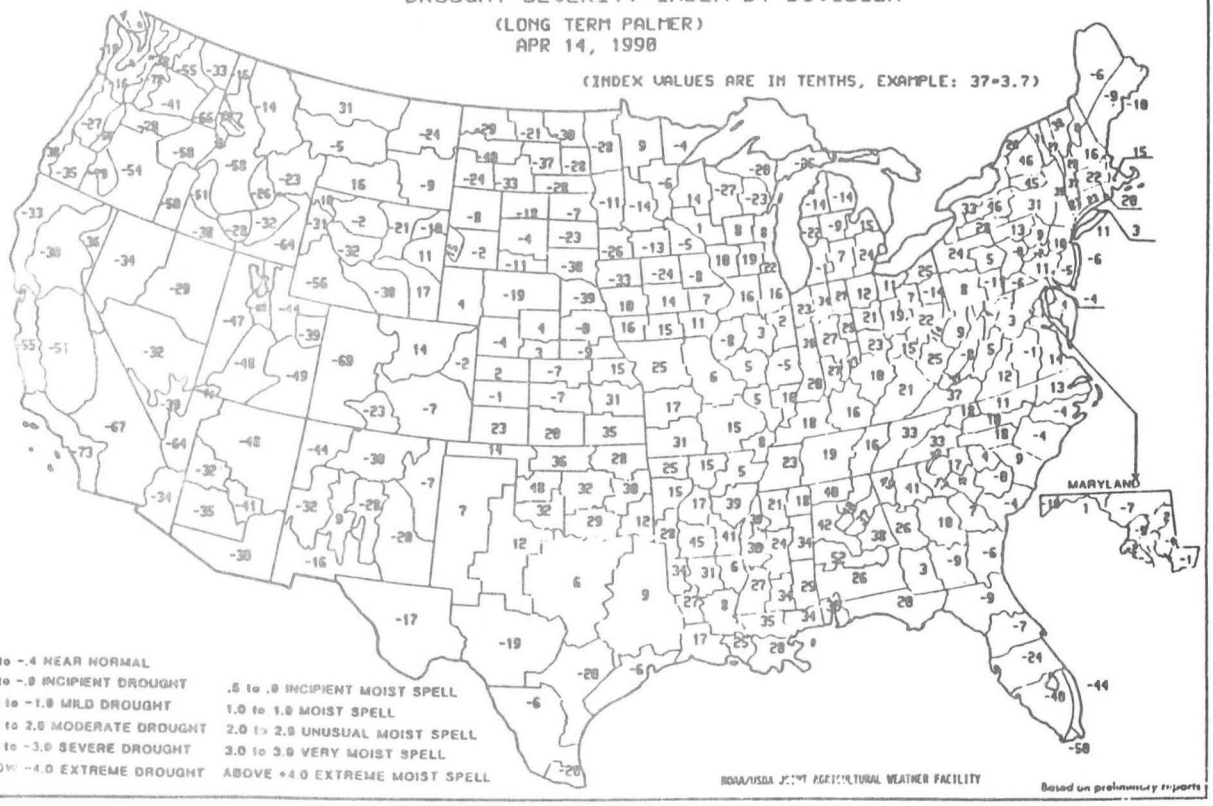
NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY

Based on preliminary reports

DROUGHT SEVERITY INDEX BY DIVISION

(LONG TERM PALMER)
APR 14, 1990

(INDEX VALUES ARE IN TENTHS, EXAMPLE: 37=3.7)

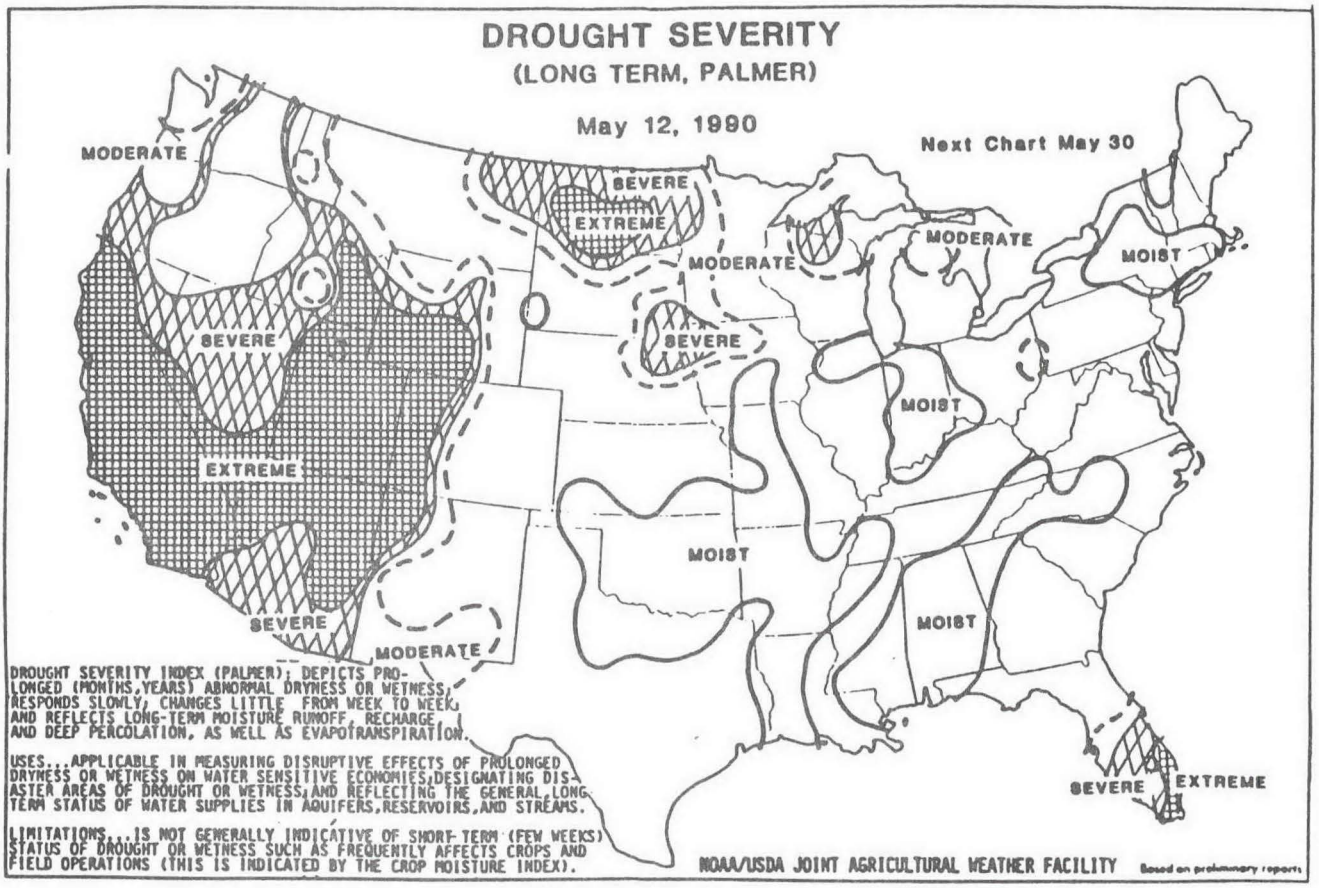


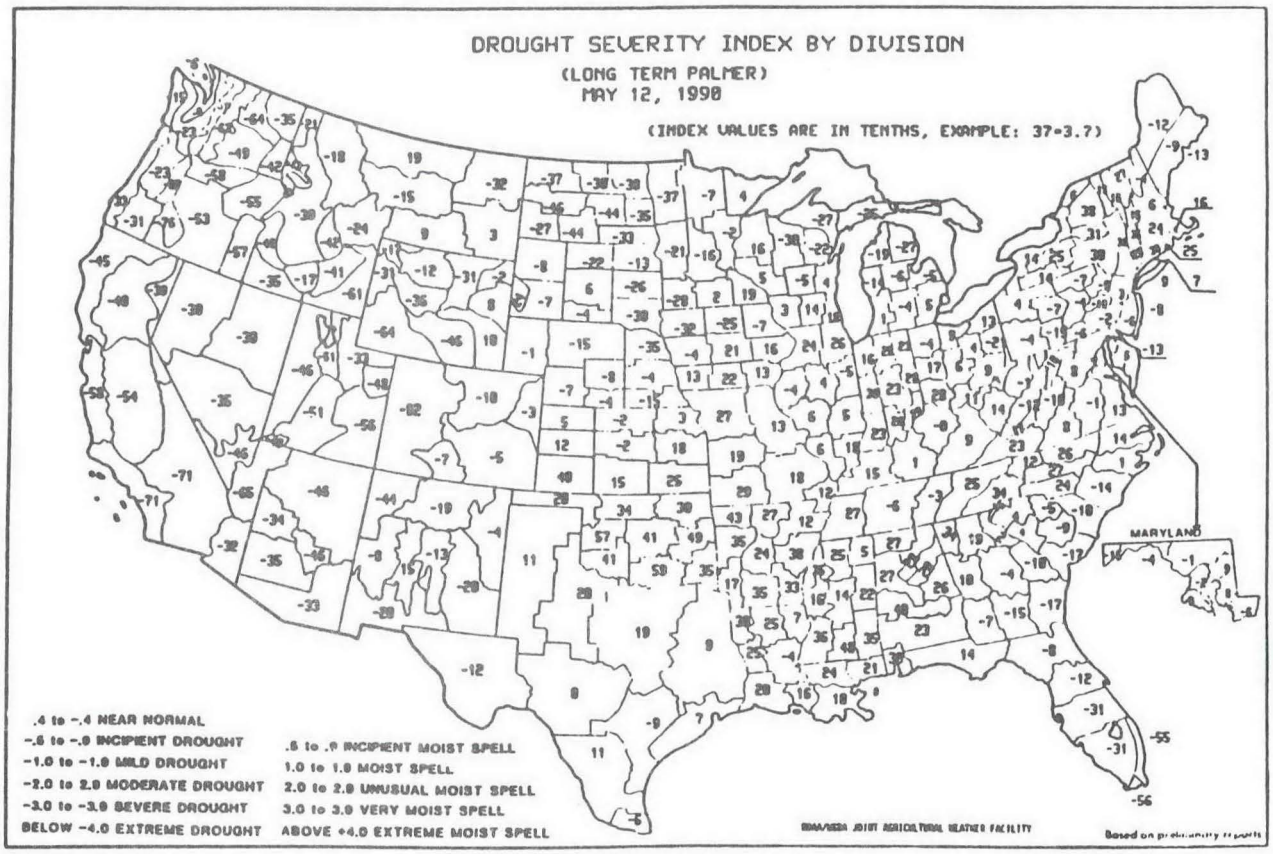
.4 to -.4 NEAR NORMAL
-.5 to -.9 INCIPIENT DROUGHT
-1.0 to -1.9 MILD DROUGHT
-2.0 to -2.9 MODERATE DROUGHT
-3.0 to -3.9 SEVERE DROUGHT
BELOW -4.0 EXTREME DROUGHT

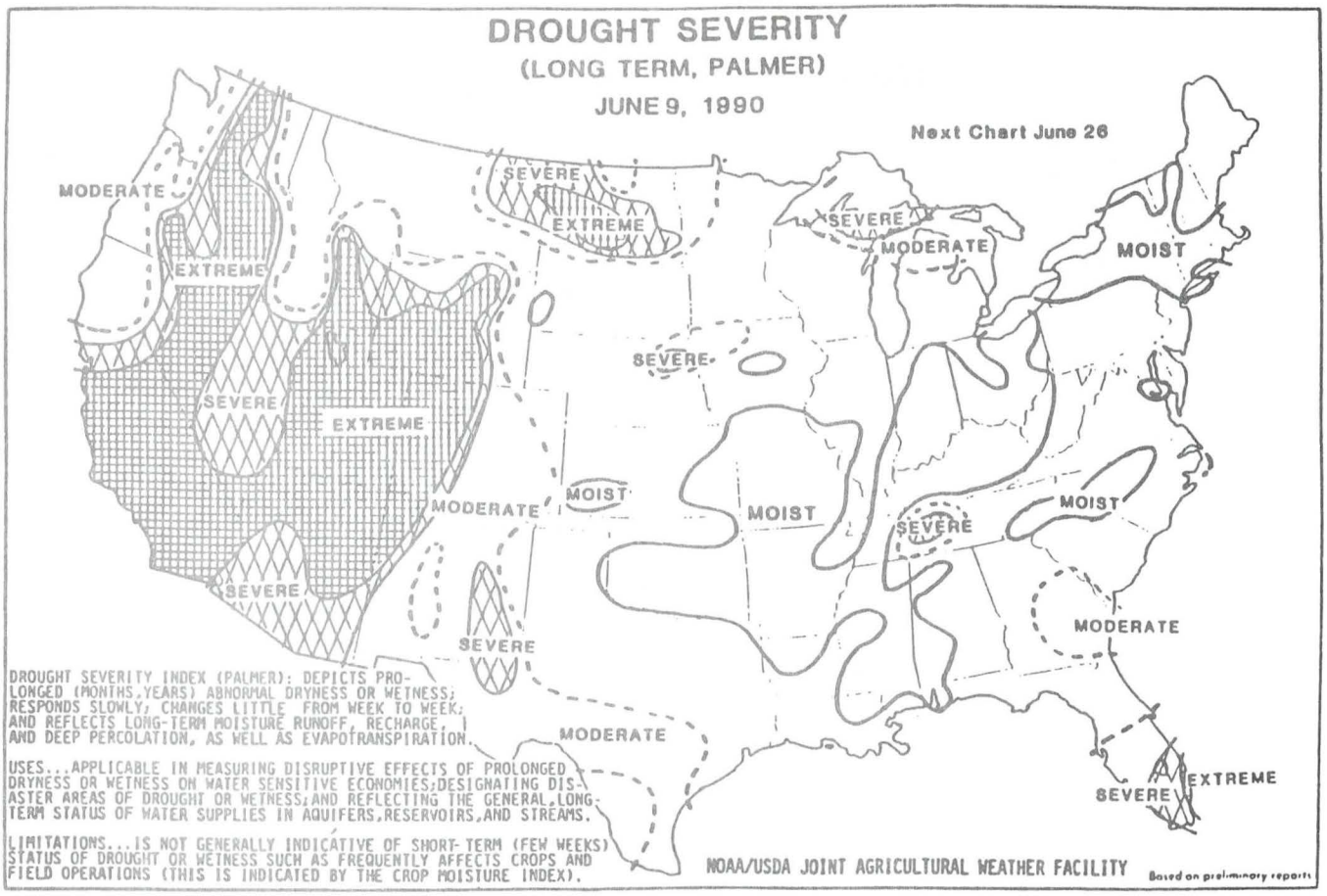
.5 to .9 INCIPIENT MOIST SPELL
1.0 to 1.9 MOIST SPELL
2.0 to 2.9 UNUSUAL MOIST SPELL
3.0 to 3.9 VERY MOIST SPELL
ABOVE +4.0 EXTREME MOIST SPELL

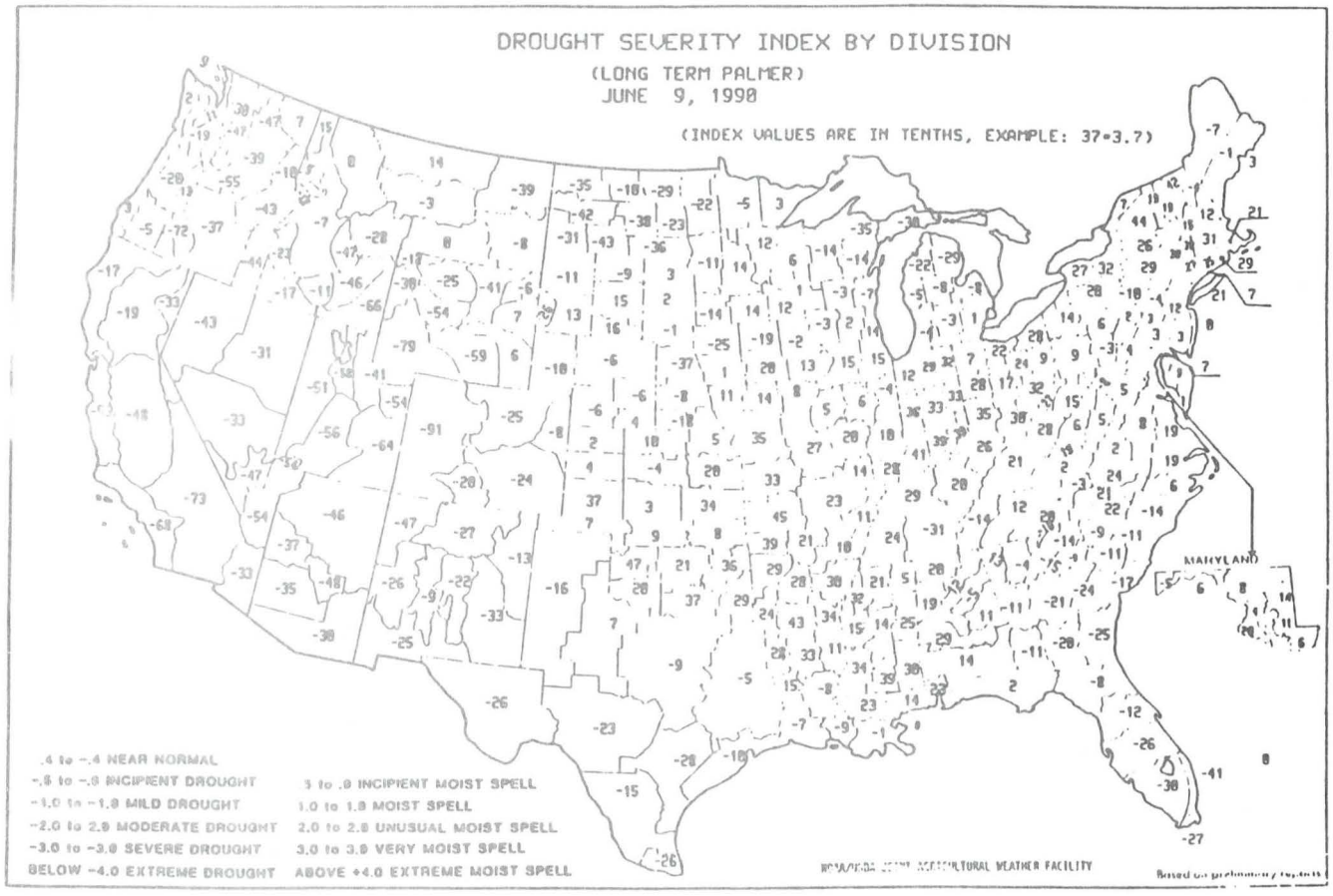
NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY

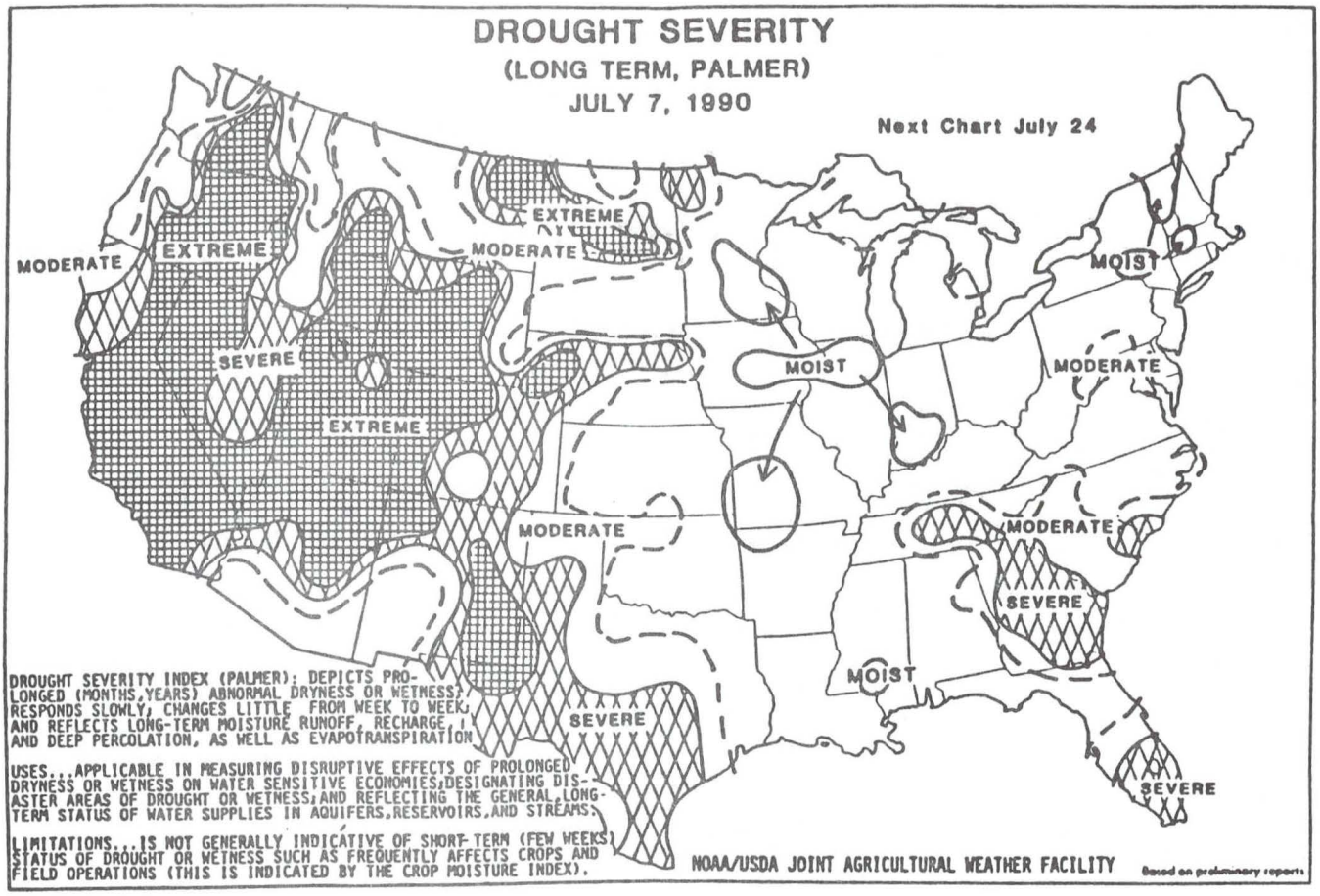
Based on preliminary reports

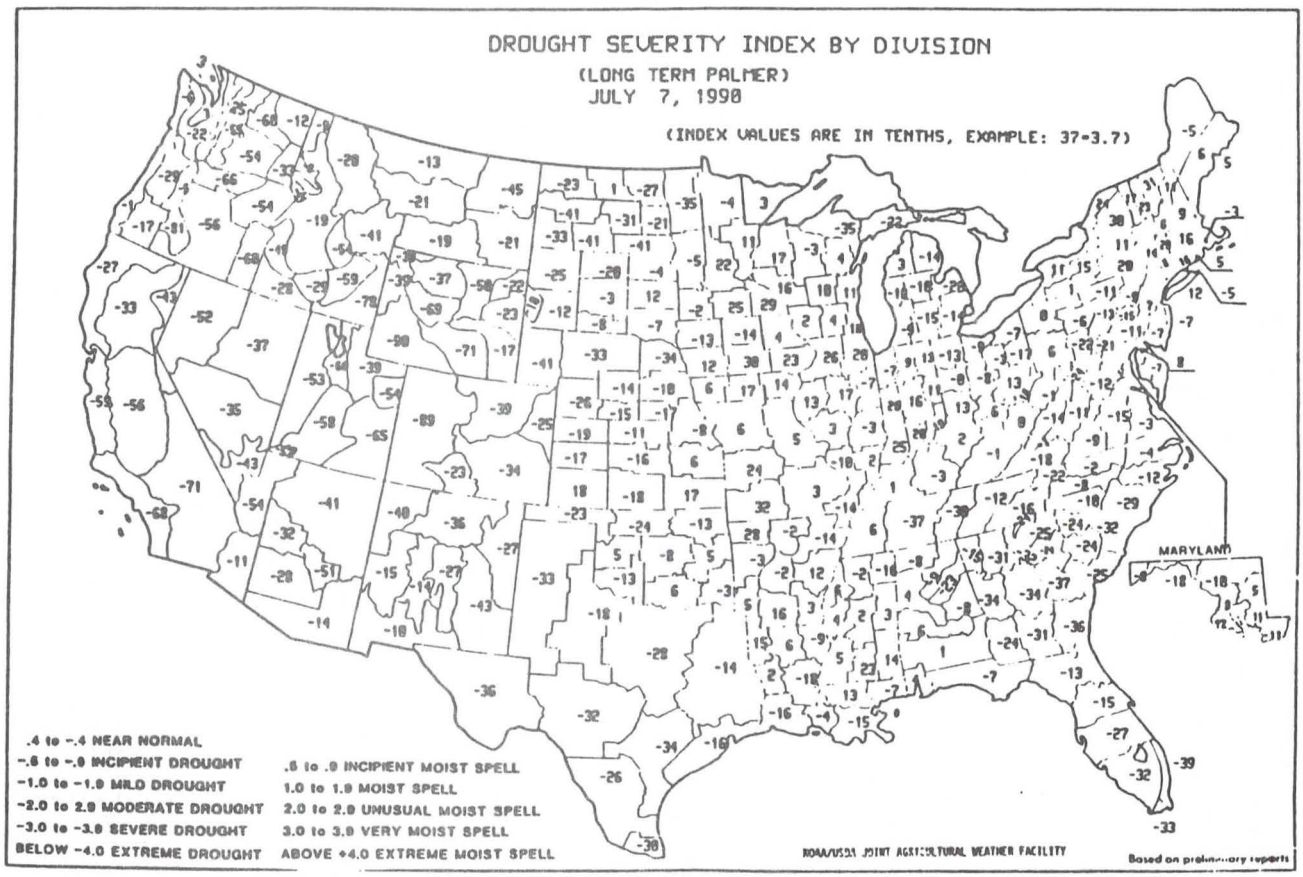

DROUGHT SEVERITY
(LONG TERM, PALMER)
May 12, 1990
Next Chart May 30
MODERATE
SEVERE
EXTREME
MODERATE
MODERATE
MOIST
SEVERE
SEVERE
MOIST
EXTREME
MOIST
SEVERE
MODERATE
MOIST
SEVERE
EXTREME
DROUGHT SEVERITY INDEX (PALMER): DEPICTS PRO-
LONGED (MONTHS,YEARS) ABNORMAL DRYNESS OR WETNESS;
RESPONDS SLOWLY, CHANGES LITTLE FROM WEEK TO WEEK,
AND REFLECTS LONG-TERM MOISTURE RUNOFF, RECHARGE,
AND DEEP PERCOLATION, AS WELL AS EVAPOTRANSPIRATION.
USES...APPLICABLE IN MEASURING DISRUPTIVE EFFECTS OF PROLONGED
DRYNESS OR WETNESS ON WATER SENSITIVE ECONOMIES,DESIGNATING DIS-
ASTER AREAS OF DROUGHT OR WETNESS,AND REFLECTING THE GENERAL,LONG
TERM STATUS OF WATER SUPPLIES IN AQUIFERS,RESERVOIRS,AND STREAMS.
LIMITATIONS...IS NOT GENERALLY INDICATIVE OF SHORT-TERM (FEW WEEKS)
STATUS OF DROUGHT OR WETNESS SUCH AS FREQUENTLY AFFECTS CROPS AND
FIELD OPERATIONS (THIS IS INDICATED BY THE CROP MOISTURE INDEX).
NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY
Based on preliminary reports

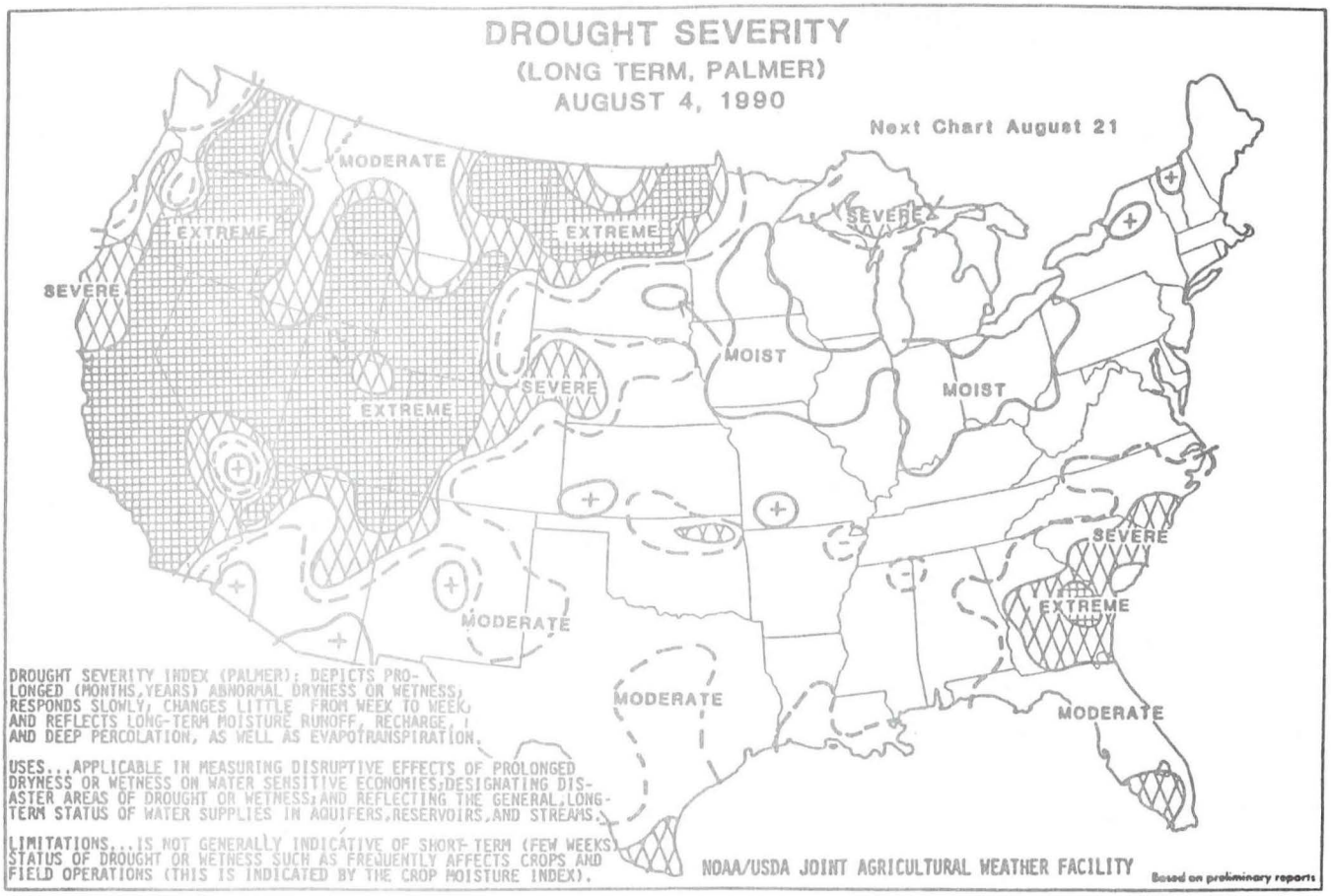

DROUGHT SEVERITY INDEX BY DIVISION
(LONG TERM PALMER)
MAY 12, 1990
(INDEX VALUES ARE IN TENTHS, EXAMPLE: 37=3.7)
MARYLAND
.4 to -.4 NEAR NORMAL
-.5 to -.9 INCIPIENT DROUGHT
-1.0 to -1.9 MILD DROUGHT
-2.0 to 2.9 MODERATE DROUGHT
-3.0 to -3.9 SEVERE DROUGHT
BELOW -4.0 EXTREME DROUGHT
.5 to .9 INCIPIENT MOIST SPELL
1.0 to 1.9 MOIST SPELL
2.0 to 2.9 UNUSUAL MOIST SPELL
3.0 to 3.9 VERY MOIST SPELL
ABOVE +4.0 EXTREME MOIST SPELL
NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY
Based on preliminary reports

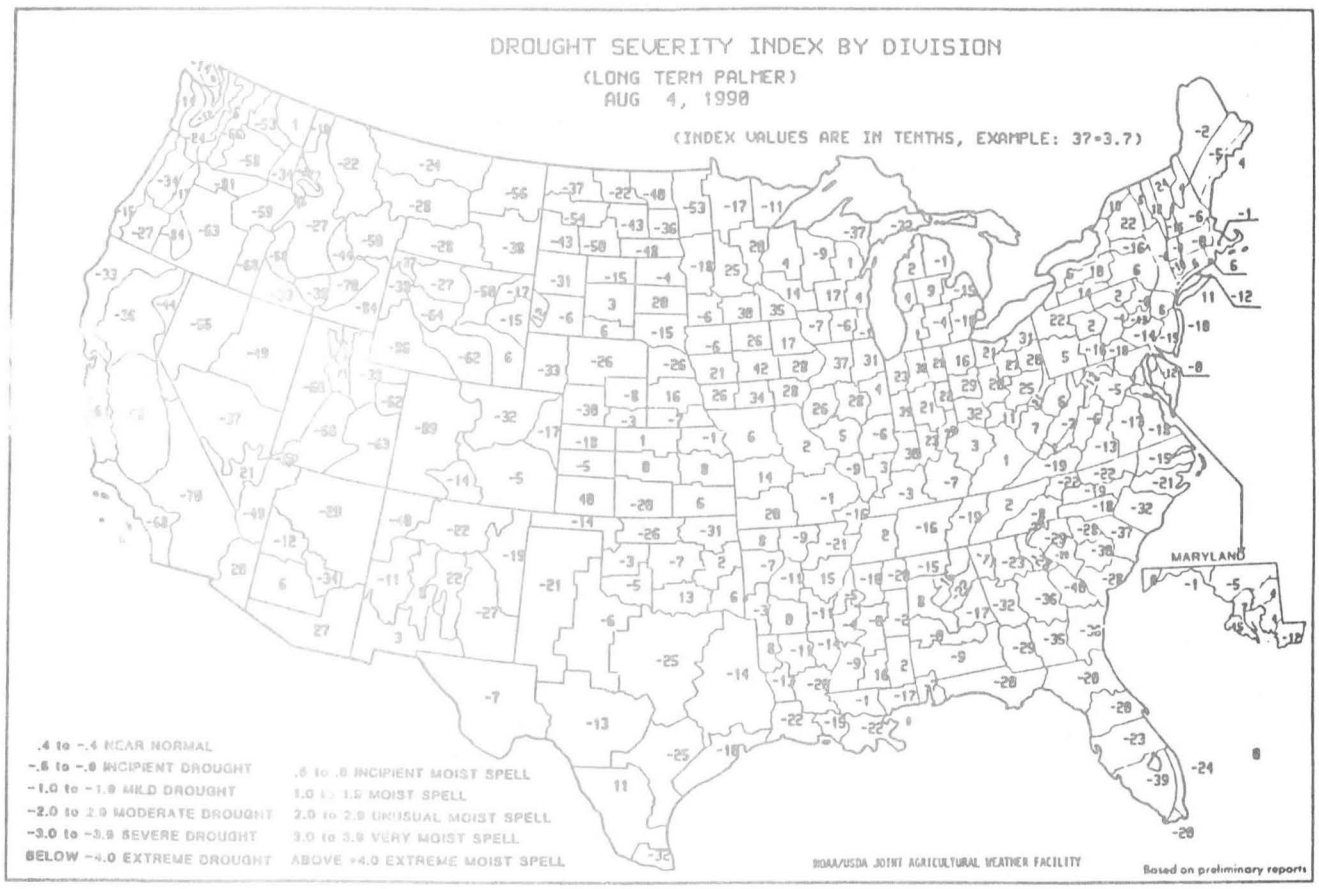

DROUGHT SEVERITY
(LONG TERM, PALMER)
JUNE 9, 1990
Next Chart June 26
MODERATE
SEVERE
EXTREME
SEVERE
EXTREME
SEVERE
MODERATE
MOIST
EXTREME
SEVERE
SEVERE
EXTREME
MODERATE
MOIST
MOIST
SEVERE
MOIST
SEVERE
MODERATE
SEVERE
MODERATE
EXTREME
SEVERE
DROUGHT SEVERITY INDEX (PALMER): DEPICTS PRO-
LONGED (MONTHS,YEARS) ABNORMAL DRYNESS OR WETNESS;
RESPONDS SLOWLY; CHANGES LITTLE FROM WEEK TO WEEK;
AND REFLECTS LONG-TERM MOISTURE RUNOFF, RECHARGE,
AND DEEP PERCOLATION, AS WELL AS EVAPOTRANSPIRATION.
USES...APPLICABLE IN MEASURING DISRUPTIVE EFFECTS OF PROLONGED
DRYNESS OR WETNESS ON WATER SENSITIVE ECONOMIES;DESIGNATING DIS-
ASTER AREAS OF DROUGHT OR WETNESS;AND REFLECTING THE GENERAL,LONG-
TERM STATUS OF WATER SUPPLIES IN AQUIFERS,RESERVOIRS,AND STREAMS.
LIMITATIONS...IS NOT GENERALLY INDICATIVE OF SHORT-TERM (FEW WEEKS)
STATUS OF DROUGHT OR WETNESS SUCH AS FREQUENTLY AFFECTS CROPS AND
FIELD OPERATIONS (THIS IS INDICATED BY THE CROP MOISTURE INDEX).
NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY
Based on preliminary reports

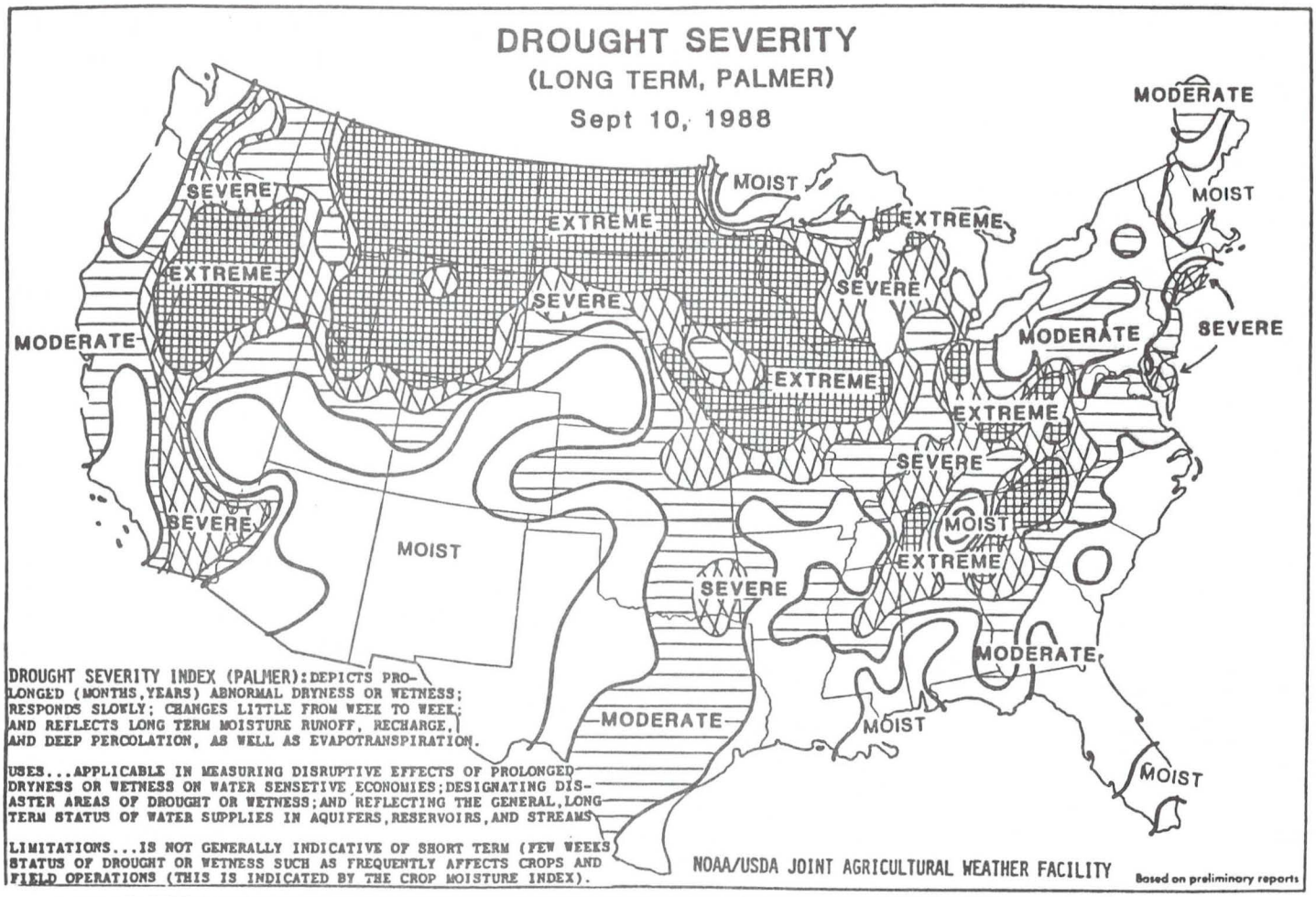

DROUGHT SEVERITY INDEX BY DIVISION
(LONG TERM PALMER)
JUNE 9, 1990
(INDEX VALUES ARE IN TENTHS, EXAMPLE: 37=3.7)
MARYLAND
.4 to -.4 NEAR NORMAL
-.5 to -.9 INCIPIENT DROUGHT
-1.0 to -1.9 MILD DROUGHT
-2.0 to 2.9 MODERATE DROUGHT
-3.0 to -3.9 SEVERE DROUGHT
BELOW -4.0 EXTREME DROUGHT
.5 to .9 INCIPIENT MOIST SPELL
1.0 to 1.9 MOIST SPELL
2.0 to 2.9 UNUSUAL MOIST SPELL
3.0 to 3.9 VERY MOIST SPELL
ABOVE +4.0 EXTREME MOIST SPELL
NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY
Based on preliminary reports

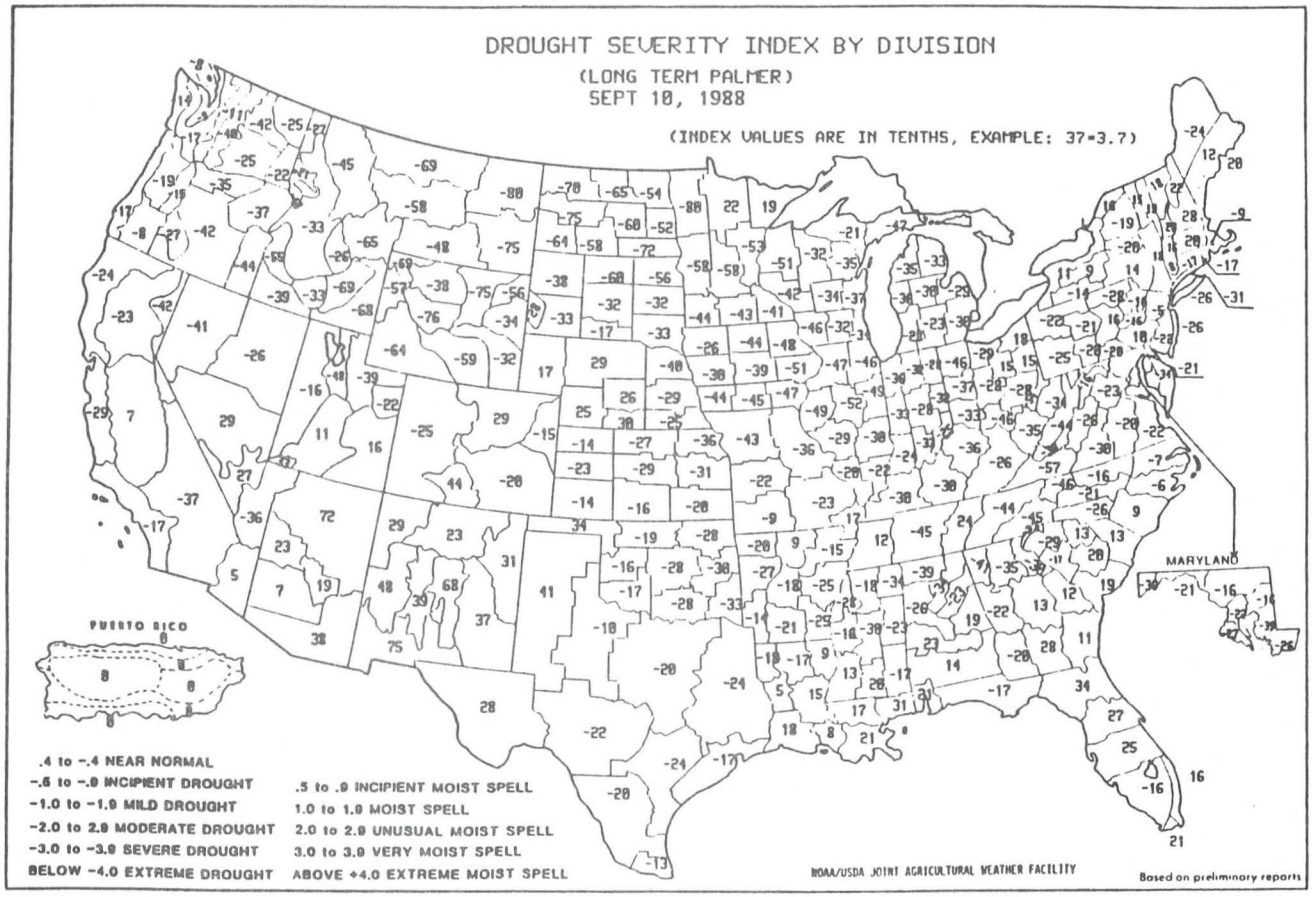

DROUGHT SEVERITY
(LONG TERM, PALMER)
JULY 7, 1990
Next Chart July 24
MODERATE
EXTREME
EXTREME
MODERATE
MOIST
SEVERE
EXTREME
MOIST
MODERATE
MODERATE
MODERATE
SEVERE
MOIST
SEVERE
SEVERE
DROUGHT SEVERITY INDEX (PALMER): DEPICTS PRO-
LONGED (MONTHS,YEARS) ABNORMAL DRYNESS OR WETNESS;
RESPONDS SLOWLY, CHANGES LITTLE FROM WEEK TO WEEK;
AND REFLECTS LONG-TERM MOISTURE RUNOFF, RECHARGE,
AND DEEP PERCOLATION, AS WELL AS EVAPOTRANSPIRATION.
USES...APPLICABLE IN MEASURING DISRUPTIVE EFFECTS OF PROLONGED
DRYNESS OR WETNESS ON WATER SENSITIVE ECONOMIES;DESIGNATING DIS-
ASTER AREAS OF DROUGHT OR WETNESS;AND REFLECTING THE GENERAL,LONG-
TERM STATUS OF WATER SUPPLIES IN AQUIFERS,RESERVOIRS,AND STREAMS.
LIMITATIONS...IS NOT GENERALLY INDICATIVE OF SHORT-TERM (FEW WEEKS)
STATUS OF DROUGHT OR WETNESS SUCH AS FREQUENTLY AFFECTS CROPS AND
FIELD OPERATIONS (THIS IS INDICATED BY THE CROP MOISTURE INDEX).
NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY
Based on preliminary reports

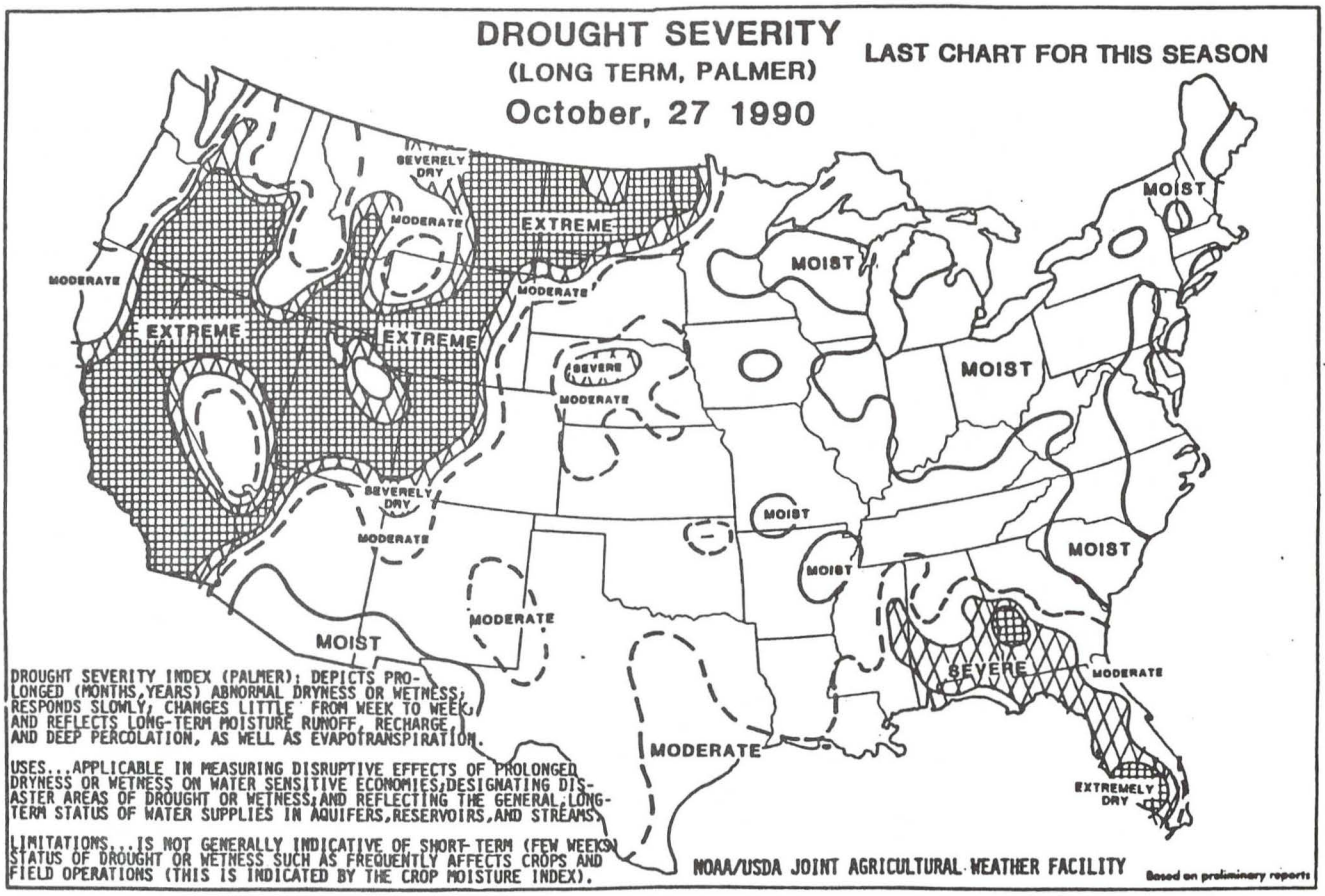

DROUGHT SEVERITY INDEX BY DIVISION
(LONG TERM PALMER)
JULY 7, 1990
(INDEX VALUES ARE IN TENTHS, EXAMPLE: 37=3.7)
MARYLAND
.4 to -.4 NEAR NORMAL
-.5 to -.9 INCIPIENT DROUGHT
-1.0 to -1.9 MILD DROUGHT
-2.0 to 2.9 MODERATE DROUGHT
-3.0 to -3.9 SEVERE DROUGHT
BELOW -4.0 EXTREME DROUGHT
.5 to .9 INCIPIENT MOIST SPELL
1.0 to 1.9 MOIST SPELL
2.0 to 2.9 UNUSUAL MOIST SPELL
3.0 to 3.9 VERY MOIST SPELL
ABOVE +4.0 EXTREME MOIST SPELL
NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY
Based on preliminary reports

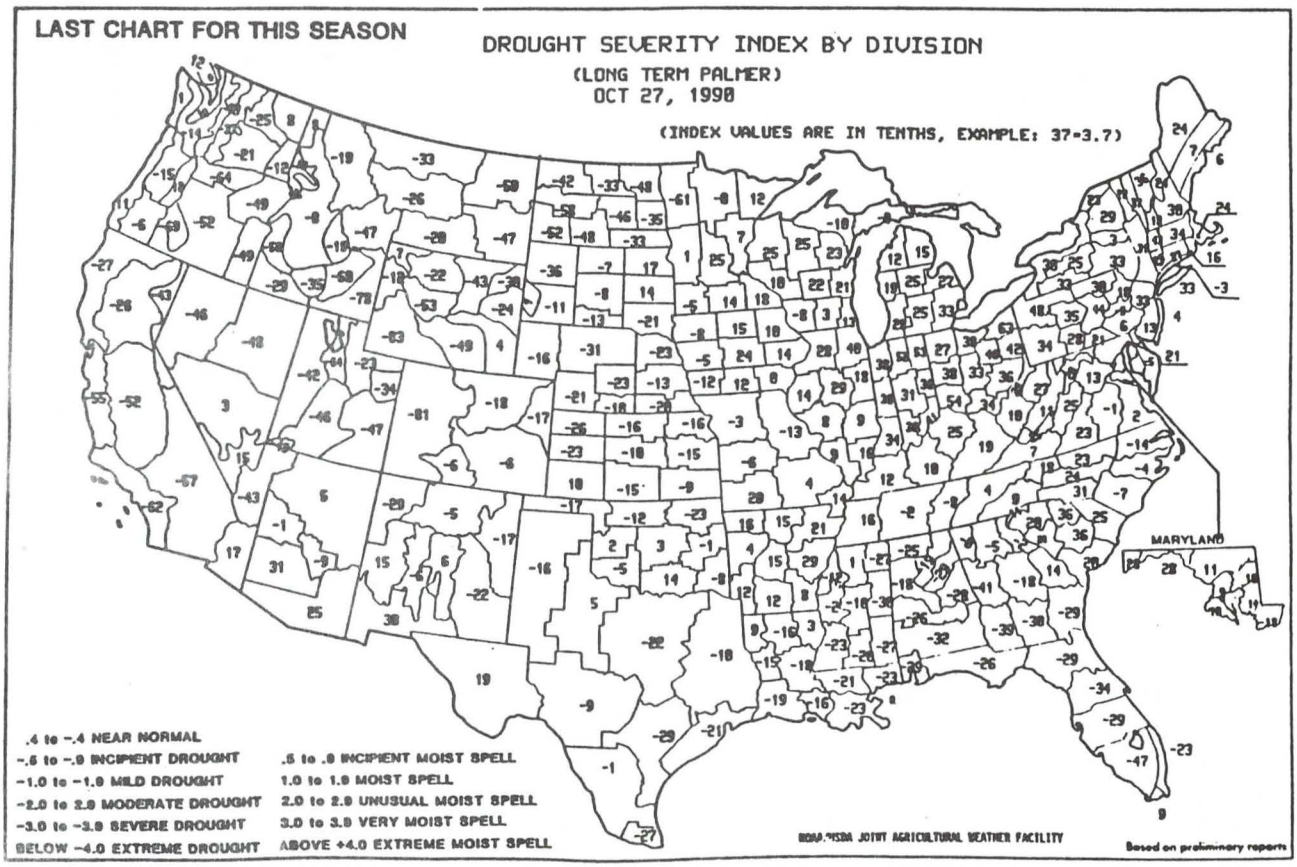

DROUGHT SEVERITY
(LONG TERM, PALMER)
AUGUST 4, 1990
Next Chart August 21
MODERATE
EXTREME
EXTREME
SEVERE
SEVERE
SEVERE
MOIST
MOIST
EXTREME
SEVERE
EXTREME
MODERATE
MODERATE
MODERATE
DROUGHT SEVERITY INDEX (PALMER); DEPICTS PRO-
LONGED (MONTHS,YEARS) ABNORMAL DRYNESS OR WETNESS;
RESPONDS SLOWLY, CHANGES LITTLE FROM WEEK TO WEEK,
AND REFLECTS LONG-TERM MOISTURE RUNOFF, RECHARGE,
AND DEEP PERCOLATION, AS WELL AS EVAPOTRANSPIRATION.
USES...APPLICABLE IN MEASURING DISRUPTIVE EFFECTS OF PROLONGED
DRYNESS OR WETNESS ON WATER SENSITIVE ECONOMIES;DESIGNATING DIS-
ASTER AREAS OF DROUGHT OR WETNESS;AND REFLECTING THE GENERAL,LONG-
TERM STATUS OF WATER SUPPLIES IN AQUIFERS,RESERVOIRS,AND STREAMS.
LIMITATIONS...IS NOT GENERALLY INDICATIVE OF SHORT-TERM (FEW WEEKS)
STATUS OF DROUGHT OR WETNESS SUCH AS FREQUENTLY AFFECTS CROPS AND
FIELD OPERATIONS (THIS IS INDICATED BY THE CROP MOISTURE INDEX).
NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY
Based on preliminary reports


DROUGHT SEVERITY INDEX BY DIVISION
(LONG TERM PALMER)
AUG 4, 1990
(INDEX VALUES ARE IN TENTHS, EXAMPLE: 37=3.7)
MARYLAND
.4 to -.4 NEAR NORMAL
-.5 to -.9 INCIPIENT DROUGHT
-1.0 to -1.9 MILD DROUGHT
-2.0 to -2.9 MODERATE DROUGHT
-3.0 to -3.9 SEVERE DROUGHT
BELOW -4.0 EXTREME DROUGHT
.5 to .9 INCIPIENT MOIST SPELL
1.0 to 1.9 MOIST SPELL
2.0 to 2.9 UNUSUAL MOIST SPELL
3.0 to 3.9 VERY MOIST SPELL
ABOVE +4.0 EXTREME MOIST SPELL
NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY
Based on preliminary reports


DROUGHT SEVERITY
(LONG TERM, PALMER)
Sept 10, 1988
MODERATE
MOIST
SEVERE
EXTREME
MODERATE
SEVERE
EXTREME
MOIST
SEVERE
EXTREME
MODERATE
SEVERE
EXTREME
EXTREME
SEVERE
MOIST
EXTREME
SEVERE
MOIST
SEVERE
MODERATE
MOIST
MOIST
DROUGHT SEVERITY INDEX (PALMER): DEPICTS PRO-
LONGED (MONTHS, YEARS) ABNORMAL DRYNESS OR WETNESS;
RESPONDS SLOWLY; CHANGES LITTLE FROM WEEK TO WEEK;
AND REFLECTS LONG TERM MOISTURE RUNOFF, RECHARGE,
AND DEEP PERCOLATION, AS WELL AS EVAPOTRANSPIRATION.
USES...APPLICABLE IN MEASURING DISRUPTIVE EFFECTS OF PROLONGED
DRYNESS OR WETNESS ON WATER SENSETIVE ECONOMIES; DESIGNATING DIS-
ASTER AREAS OF DROUGHT OR WETNESS; AND REFLECTING THE GENERAL, LONG
TERM STATUS OF WATER SUPPLIES IN AQUIFERS, RESERVOIRS, AND STREAMS
LIMITATIONS...IS NOT GENERALLY INDICATIVE OF SHORT TERM (FEW WEEKS)
STATUS OF DROUGHT OR WETNESS SUCH AS FREQUENTLY AFFECTS CROPS AND
FIELD OPERATIONS (THIS IS INDICATED BY THE CROP MOISTURE INDEX).
NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY
Based on preliminary reports


DROUGHT SEVERITY INDEX BY DIVISION
(LONG TERM PALMER)
SEPT 10, 1988
(INDEX VALUES ARE IN TENTHS, EXAMPLE: 37=3.7)
MARYLAND
PUERTO RICO
.4 to -.4 NEAR NORMAL
-.5 to -.9 INCIPIENT DROUGHT
-1.0 to -1.9 MILD DROUGHT
-2.0 to 2.9 MODERATE DROUGHT
-3.0 to -3.9 SEVERE DROUGHT
BELOW -4.0 EXTREME DROUGHT
.5 to .9 INCIPIENT MOIST SPELL
1.0 to 1.9 MOIST SPELL
2.0 to 2.9 UNUSUAL MOIST SPELL
3.0 to 3.9 VERY MOIST SPELL
ABOVE +4.0 EXTREME MOIST SPELL
NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY
Based on preliminary reports


DROUGHT SEVERITY
(LONG TERM, PALMER)
October, 27 1990
LAST CHART FOR THIS SEASON
SEVERELY DRY
MODERATE
EXTREME
MOIST
SEVERE
DROUGHT SEVERITY INDEX (PALMER): DEPICTS PROLONGED (MONTHS,YEARS) ABNORMAL DRYNESS OR WETNESS; RESPONDS SLOWLY; CHANGES LITTLE FROM WEEK TO WEEK; AND REFLECTS LONG-TERM MOISTURE RUNOFF, RECHARGE AND DEEP PERCOLATION, AS WELL AS EVAPOTRANSPIRATION.
USES...APPLICABLE IN MEASURING DISRUPTIVE EFFECTS OF PROLONGED DRYNESS OR WETNESS ON WATER SENSITIVE ECONOMIES;DESIGNATING DISASTER AREAS OF DROUGHT OR WETNESS;AND REFLECTING THE GENERAL,LONG-TERM STATUS OF WATER SUPPLIES IN AQUIFERS,RESERVOIRS,AND STREAMS.
LIMITATIONS...IS NOT GENERALLY INDICATIVE OF SHORT-TERM (FEW WEEKS) STATUS OF DROUGHT OR WETNESS SUCH AS FREQUENTLY AFFECTS CROPS AND FIELD OPERATIONS (THIS IS INDICATED BY THE CROP MOISTURE INDEX).
NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY
Based on preliminary reports


LAST CHART FOR THIS SEASON
DROUGHT SEVERITY INDEX BY DIVISION
(LONG TERM PALMER)
OCT 27, 1990
(INDEX VALUES ARE IN TENTHS, EXAMPLE: 37=3.7)
MARYLAND
.4 to -.4 NEAR NORMAL
-.5 to -.9 INCIPIENT DROUGHT
-1.0 to -1.9 MILD DROUGHT
-2.0 to 2.9 MODERATE DROUGHT
-3.0 to -3.9 SEVERE DROUGHT
BELOW -4.0 EXTREME DROUGHT
.5 to .9 INCIPIENT MOIST SPELL
1.0 to 1.9 MOIST SPELL
2.0 to 2.9 UNUSUAL MOIST SPELL
3.0 to 3.9 VERY MOIST SPELL
ABOVE +4.0 EXTREME MOIST SPELL
NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY
Based on preliminary reports

AIRCRAFT USE REPORT

INCLUSIVE DATES:100189/093090

TYPE OF USE	HOURS FLOWN			
	FS-OWNED	CONTRACT	TOTAL HOURS FLOWN	HELICOPTER HOURS
AVIATION MANAGEMENT ACTIVITIES				
AIRCRAFT, PILOT, UNIT INSPECTIONS	1.10	22.28	23.38	4.50
PILOT TRAINING AND PROFICIENCY	167.20	.00	167.20	2.60
AIRCRAFT MAINTENANCE-TEST FLIGHT	24.50	.00	24.50	.80
OTHER	12.90	14.50	27.40	1.50
TOTAL	205.70	36.78	242.48	9.40
TOTAL HOURS 251.88				
FIRE SUPPRESSION ACTIVITIES				
PERSONNEL TRANSPORT	171.40	999.28	1170.68	506.90
RECONNAISSANCE	6.70	390.44	397.14	252.70
DETECTION	.00	293.20	293.20	1.20
AIR ATTACK	.00	117.77	117.77	.80
LEAD PLANE	290.80	39.40	330.20	.00
RETARDANT/WATER DELIVERY	.00	241.55	241.55	202.50
SMOKEJUMPER TRANSPORT	421.80	1.90	423.70	.00
HELITACK	.00	.00	.00	454.20
RAPPELLER TRANSPORT	.00	.00	.00	.00
EQUIPMENT/SUPPLY TRANSPORT	61.40	26.70	88.10	177.90
INFRARED PHOTOGRAPHY	.00	.00	.00	16.20
AERIAL IGNITION	.00	.00	.00	5.10
OTHER	8.40	88.80	97.20	348.60
TOTAL	960.50	2199.04	3159.54	1966.10
TOTAL HOURS 5125.64				
OTHER ACTIVITIES				
PERSONNEL TRANSPORT	629.70	553.40	1183.10	180.50
SURVEY/OBSERVATION	.80	39.00	39.80	205.70
FERRY	65.70	111.48	177.18	48.80
ANIMAL/WILDLIFE COUNT	.00	37.65	37.65	5.90
SEARCH AND RESCUE	.00	2.00	2.00	9.30
LAW ENFORCEMENT/INVESTIGATIONS	.00	5.69	5.69	6.50
RESEARCH	.00	.00	.00	.00
AIR QUALITY MONITORING	.00	.00	.00	.00
FIRE PREVENTION	.00	.00	.00	15.20
PRESCRIBED BURNING	.00	.30	.30	22.50
CARGO TRANSPORT HAZARDOUS MATERIALS	.00	.50	.50	.00
CARGO TRANSPORT	20.10	34.40	54.50	62.90
AERIAL PHOTOGRAPHY	161.30	.00	161.30	10.60
INFRARED PHOTOGRAPHY	.00	.00	.00	.00
AERIAL IGNITION	.00	.00	.00	6.90
ACCIDENT INVESTIGATIONS	.00	.00	.00	.00
OTHER	17.30	65.60	82.90	21.90
TOTAL	894.90	880.02	1774.92	596.70
TOTAL HOURS 2371.62				
COLUMN TOTAL	2061.10	2382.84	4443.94	1892.20
GRAND TOTAL HOURS 7749.14				

FS-OWNED — CONTRACT

HOURS FLOWN

USER UNIT	FIXED WING AVIATION ACTIVITIES	FIXED WING FIRE ACTIVITIES	FIXED WING OTHER ACTIVITIES	HELICOPTER AVIATION ACTIVITIES	HELICOPTER FIRE ACTIVITIES	HELICOPTER OTHER ACTIVITIES
PAYETTE	.80	612.66	258.97	2.20	208.40	149.40
SALMON	.00	38.64	95.40	1.10	133.00	22.40
SAWTOOTH	.00	71.24	14.10	.00	101.70	96.20
TARGHEE	.00	69.33	20.15	.00	11.40	6.60
TOIYABE	2.30	111.50	112.10	.00	52.90	.80
UINTA	6.00	68.90	20.10	.00	.00	9.10
WASATCH	.00	48.50	20.80	.00	24.90	38.10
R0	115.90	86.15	588.05	3.30	.00	.00
R0	.20	.00	.60	.00	.00	.00
R0	.00	.00	3.20	.00	.00	.00
R5	.00	1.70	.00	.00	.00	.00
R5	.00	9.00	.00	.00	.00	.00
R5	.00	8.30	.00	.00	.00	.00
R5	.00	30.30	.00	.00	.00	.00
R5	.00	2.10	.00	.00	.00	.00
R5	.00	.00	2.60	.00	.00	.00
R5	.00	19.30	11.40	.00	.00	.00
R6	5.10	24.70	3.40	.00	.00	.00
R6	.00	4.70	.00	.00	.00	.00
R6	.00	27.44	.00	.00	.00	.00
R6	.00	5.10	.00	.00	.00	.00
R6	.00	8.00	8.00	.00	.00	.00
R6	.00	7.90	.00	.00	.00	.00
R6	.00	5.57	.00	.00	.00	.00
R6	.00	4.10	.00	.00	.00	.00
R6	.00	14.40	.00	.00	.00	.00
R6	.00	4.10	3.50	.00	.00	.00
R8	8.70	.00	.00	.00	.00	.00
R10	.00	1.80	1.90	.00	.00	.00
R10	.00	2.60	.00	.00	.00	.00
WO	.00	.00	11.10	.00	.00	.00
WO	65.80	.00	33.90	.00	.00	.00
TOTAL	237.48	2527.54	1678.92	9.40	1391.10	491.70

USER UNIT	FIXED WING AVIATION ACTIVITIES	FIXED WING FIRE ACTIVITIES	FIXED WING OTHER ACTIVITIES	HELICOPTER AVIATION ACTIVITIES	HELICOPTER FIRE ACTIVITIES	HELICOPTER OTHER ACTIVITIES
AK	.00	4.90	.00	.00	79.60	1.10
ARMY	.00	.00	16.30	.00	.00	.00
BIA	.00	9.00	.00	.00	88.20	4.00
BLM	.00	75.67	13.10	.00	83.80	25.10
ID	.00	12.10	.00	.00	2.70	5.10
NPS	.00	7.30	1.70	.00	38.70	10.00
OTHR	.00	.60	11.20	.00	.00	4.10
UT	.00	.00	.90	.00	.00	.00
R1	.00	8.60	.00	.00	.00	.00
R1	.00	10.50	.00	.00	.00	.00
R1	.00	5.07	.00	.00	.00	.00
R1	.00	15.20	.00	.00	.00	.00
R1	.00	9.50	.00	.00	.00	.00
R1	.00	5.10	6.10	.00	.00	.00
R1	.00	19.40	8.10	.00	.00	.00
R1	.00	.00	.00	.00	.00	3.30
R1	.00	.00	27.40	.00	.00	.00
R1	17.40	36.90	15.90	.00	.00	.00
R1	3.00	.00	12.90	.00	.00	.00
R2	.00	24.90	.00	.00	.00	.00
R2	.00	14.90	.00	.00	.00	.00
R2	1.10	17.60	.00	.00	.00	.00
R3	.00	20.00	.00	.00	8.60	.00
R3	.00	.00	2.00	.00	.00	.00
R3	1.78	49.71	7.25	.00	.00	.00
R3	.00	72.17	.00	.00	.00	.00
R3	.00	3.33	.00	.00	.00	.00
R3	.00	2.90	.00	.00	29.30	.00
R3	.00	19.41	.00	.00	9.80	.00
R3	.00	1.60	.00	.00	.00	.00
R3	.00	21.70	10.90	.00	.00	.00
R3	.00	1.50	.00	.00	.00	.00
R4	.00	5.20	.00	.00	.00	.00
ASHLEY	8.40	107.20	17.40	2.10	65.70	6.70
BOISE	.00	227.50	60.10	.00	90.10	45.50
BRIDGER-TETON	.60	68.80	35.60	.00	211.10	19.20
CARIBOU	.00	4.30	9.40	.00	.00	.00
CHALLIS	.40	177.48	136.70	.70	150.30	42.80
DIXIE	.00	172.82	9.60	.00	.00	.00
FISHLAKE	.00	6.65	2.20	.00	.00	.00
HUMBOLDT	.00	.00	27.30	.00	.00	2.20
MANTI-LASAL	.00	.00	8.90	.00	.00	.00

CARGO AND MATERIAL DROPPED

PARACARGO	99432
AIR FREIGHT	548079
SLING	344978
HELITORCH	3748
RETARDANT	554235
WATER	173470

NUMBER OF PASSENGERS TRANSPORTED

	FIXED-WING	HELICOPTER
FIRE	3266	4150
OTHER	3619	1605

AIRCRAFT USE REPORT

INCLUSIVE DATES:100189/ 93090

TYPE OF USE	HOURS FLOWN FS-OWNED	HOURS FLOWN CONTRACT	TOTAL	HELICOPTER HOURS
OTHER ACTIVITIES				
AVIATION AND FIRE MANAGEMENT	310.30	260.48	570.78	264.60
ADMINISTRATIVE MANAGEMENT	20.70	121.70	142.40	26.00
ADMINISTRATIVE SERVICES	7.40	13.50	20.90	2.60
CIVIL RIGHTS	3.90	.00	3.90	.00
COMPUTER SERVICES	1.00	4.90	5.90	.00
ENGINEERING	172.80	29.20	202.00	1.80
EXPERIMENT STATIONS	29.80	9.40	39.20	.00
FISCAL AND ACCOUNTING MANAGEMENT	12.20	6.10	18.30	.00
FOREST PEST MANAGEMENT	.00	1.30	1.30	33.50
HUMAN RESOURCE PROGRAMS	.00	.00	.00	2.60
LANDS	9.40	24.20	33.60	.00
LAND MANAGEMENT PLANNING	5.90	3.80	9.70	.00
LAW ENFORCEMENT	.00	15.10	15.10	6.20
MINERALS AND GEOLOGY	30.00	19.00	49.00	3.30
OFFICE OF GENERAL COUNCIL	4.60	1.50	6.10	.00
OFFICE OF INFORMATION	1.10	5.00	6.10	.00
PERSONNEL MANAGEMENT	6.80	1.80	8.60	.00
PROGRAM PLANNING AND BUDGET	9.20	1.20	10.40	1.40
RANGE MANAGEMENT	39.40	25.40	64.80	45.00
RECREATION MANAGEMENT	39.00	128.09	167.09	12.10
REGIONAL FORESTER/FOREST SUPERVISOR	83.80	54.70	138.50	.00
STATE AND PRIVATE FORESTRY	8.50	.30	8.80	1.30
TIMBER MANAGEMENT	27.30	21.60	48.90	39.20
WATERSHED AND AIR MANAGEMENT	5.90	1.40	7.30	5.40
WILDLIFE MANAGEMENT	30.40	33.55	63.95	29.10
OTHER AGENCIES AND COOPERATORS	22.50	.00	22.50	7.10
OTHER	13.00	.80	13.80	10.50
TOTAL	894.90	784.02	1678.92	491.70

TOTAL HOURS 2170.62

NUMBER OF PASSENGERS TRANSPORTED

FIXED-WING	HELICOPTER
3527	1590

Helicopter Use Data
Intermountain Region
1990

1990 HELICOPTER USE DATA - INTERMOUNTAIN REGION

FOREST	CREW SIZE	A/C MAKE & MODEL	MANDATORY CONTRACT LENGTH (DAYS)	ACTUAL CONTRACT LENGTH (DAYS)	HOURS FLOWN FOR A&FM	HOURS FLOWN FOR OTHER	HOURS FLOWN ON FOREST	HOURS FLOWN OFF FOREST	TOTAL HOURS FLOWN	DAILY AVAILABILITY RATE	HOURLY RATE	TOTAL CONTRACT COST
ASHLEY	7	BELL 206 B-III	100	103	132.4	113.0	70.4	175.0	245.4	$367.00	400.00	99,141.
BOISE	8	BELL 206 L-3	90	90	224.2	10.0	232.1	2.1	234.2	(180 HR. GUARANTEE)	743.00	163,869.
BRIDGER-TETON	7	BELL 206 B-III	118	118	259.1	87.5	187.5	87.5	275.0	(236 HR. GUARANTEE)	435.00	132,021.
CHALLIS	3	BELL 206 B-III	100	112	234.7	61.0	87.5	208.2	295.7	(200 HR. GUARANTEE)	445.00	153,113.
PAYETTE (KRASSEL)	18	BELL 206 B-III	90	102					251.5	(180 HR. GUARANTEE)	432.00	129,361.
PAYETTE (PRICE VALLEY)	7	BELL 206 B-III	90	101	252.7	18.0	143.2	127.5	270.7	(180 HR. GUARANTEE)	432.00	133,361.
SALMON	10	SA-315B LAMA	64	69					67.9	888.88	473.00	57,933.
SAWTOOTH	6	BELL 206 B-III	100	116	215.7	112.0	247.8	79.9	327.7	(200 HR. GUARANTEE)	359.00	136,994.
TOIYABE	9	BELL 206 L-3	60	82	156.5	13.0	43.0	92.0	169.5	2 HRS./DAY 1,300.00	650.00	179,640.
FISHLAKE TYPE II (SEVERITY)		BELL 212	90	90	288.4				288.4	3,850.00	510.00	550,283.
CHALLIS TYPE II (SEVERITY)		BELL 212	30	30	49.9				49.9	3,850.00	510.00	146,166.
NON-R-4, TYPE II (SEVERITY)		VARIOUS			APROX 40 HR				APROX 40	3,700.00	725.00	114,000.
TYPE II CWN									400.1			696,503.
OAS HELICPTER USE IN R-4									197.3			140,502.
TYPE I CWN USE									90.3			368,478.
TOTAL									3,204			3,201,365.

RETARDANT USE 1985 - 1990

SALT LAKE CITY TANKER BASE.....

1985 164,150
1986 122,500
1987 43,600
1988 546,000
1989 136,300
1990 68,550

BOISE IDAHO TANKER BASE

1985 375,250
1986 548,305
1987 91,300
1988 545,616
1989 1,321,850
1990 248,700

CEDAR CITY UTAH TANKER BASE

1985 26,900
1986 26,000
1987 59,500
1988 1,600
1989 102,500
1990 16,000

MCCALL IDAHO TANKER BASE

1985 227,387
1986 191,105
1987 101,900
1988 400,000
1989 740,000
1990 324,076

SMOKEJUMPER AND HELITACK REPORT
REGION 4
1990

	SMOKEJUMPERS		HELITACK
ITEM	HOME REGION	FROM OTHER REGIONS	CREWMEN
1. Number of bases	1		8
2. Number of jumpers or crewman	69		69
3. Number of fires attacked or jumped			
a.Initial attack	93	30	225
b.Follow-up	18	2	207
c.Total	111	32	432
4. Number of person jumps to fires	476	91	
5. Person-days on fires	2,397	172	2,513

SMOKEJUMPER SUMMARY

The total number of jumpers at the McCall base this year was 69. The base was also boosted by 104 smokejumpers from other bases during the course of the summer.

JUMP ACTIVITY: FROM MCCALL

	FIRES	FIRE JUMPS	TRAINING JUMPS	RESCUE JUMPS
R-4 Jumpers	95	457	642	2
O.R. Jumpers	*10*	*52*	*16*	*0*
Totals	105	509	658	2

JUMP ACTIVITY: OUT OF REGION BY MCCALL JUMPERS

	FIRES	FIRE JUMPS	TRAINING JUMPS
R-1	2	8	31
R-3	20	57	13
R-5	8	25	0
R-6	25	61	0
Alaska BLM	42	117	12
Boise BLM	0	0	14

TOTAL JUMPS: BY MCCALL JUMPERS

	FIRE JUMPS	TRAINING JUMPS	RESCUE JUMPS
From McCall	457	642	2
Out of region	*268*	*70*	*0*
Totals	725	712	2

(Total Jumps made by Mccall Jumpers through 10-15-90 = 1439

GROUND ACTION:

	PEOPLE	FIRES
R-4 Jumpers from McCall	56	13
Out of Region McCall Jumpers	4	3
Total Ground action by McCall Jumpers	60	16

FY90 FIRE COST SUMMARY
(M DOLLARS)

	UNIT	FFFP	FFFS	SEVERITY	FIRES
1	ASHLEY	406	498	102	383
2	BOISE	1,594	3,313	240	5,297
3	BRIDGER-TETON	319	1,001	91	1,520
4	CARIBOU	199	156	24	37
5	CHALLIS	546	649	15	914
6	DIXIE	431	289	145	243
7	FISHLAKE	224	311	38	506
8	HUMBOLDT	220	40	0	56
9	MANTI-LASAL	284	228	38	30
10	PAYETTE	2,721	2,747	202	4,512
11	SALMON	464	979	14	1,333
12	SAWTOOTH	800	599	45	598
13	TARGHEE	381	765	93	156
14	TOIYABE	1,889	1,512	335	1,977
15	UINTA	347	413	49	828
16	WASATCH	475	593	100	1,129
17	RO	2,271	1,037	4	496
18	TOTAL	13,574	15,130	1,534	20,015

FFFP = Total presuppression funds expended by Forest.
FFFS = Total suppression funds expended by Forest.(Includes resource support to other Regions and units.)
SEVERITY = Amount of severity funds expended by Forest.
FIRES = Forest Service-wide costs of wildfires by Forest. (Total cost of fires on each unit.)

1990 RESOURCE ORDERS

The 1990 Fire Season was a below average year in the Regional Dispatch Office.

During the 1990 fire season the Great Basin Dispatch Center was open 7 days a week from May 20 through October 6. During the 140 day period the office processed 6,127 resource orders. The 5 year average (1985-1989) is 7,532 resource order. Thus, 1990 was a below average year for resource orders processed through the Regional Office.

96 different detailers were used in the Great Basin Dispatch Center during the 1990 season compared to our 5 year average of 116 detailers. The office was open 24 hours a day for 32 days compared to the 5 year average of 56 days.

RESOURCE ORDERS PLACED THROUGH THE REGION 4 COORDINATION CENTER

TYPE	R4-R0
AIRCRAFT	320
OVERHEAD	2,590
CREWS	338
EQUIPMENT	318
SUPPLIES	3,186
TOTAL	6,752

REGION 4 AIRCRAFT INCIDENT SUMMARY FOR FY 1990

A summary of all reported aircraft incidents from October 1, 1989 to September 30, 1990 shows that this has been an accident-free year for Region 4.

Aviation activity was less than the previous 5 years. As a means of comparison, our Regional Coordination Center processed 116 resource orders for helicopters in 1990, 250 orders in 1989, and 311 in 1988.

With the less intense fire season, the exposure and potential for aircraft accidents/ incidents was greatly reduced. Consequently, less incident reports were received. In 1989, 127 incidents were submitted as compared with 62 in 1990.

Incident report analysis indicates that unplanned external cargo load releases increased this year, continuing a definite upward trend over the past few years. This year we experienced 16 unplanned releases. The pilot intentionally released four of these while encountering severe down drafts, six were the result of the pilot just mistakingly activating the cargo release switch, and the remaining six were due to cargo hook mechanical malfunctions or deficiencies.

In comparing the numbers of human error incidents and mechanical deficiencies, the 1990 analysis indicates that the score is fairly equal.

As in past years, most incident reports received (64 percent) involved helicopters.

1990
PERSONNEL EMPLOYED ON FIRE MANAGEMENT ACTIVITIES

CATEGORY	NUMBER	
	SUB-TOTAL	**TOTAL**
1. Regular appointed personnel		
a. Full time fire protection	121	
b. Part time fire protection	145	
c. Others used on presuppression	177	
d. Others used on suppression	711	
TOTAL		1154
2. Seasonal or short-term personnel		
a. Regular fire protection	468	
b.Others some time on fire protection work	897	
c. Emergency firefighters	1,795	
TOTAL		3,160
3. Number of casual employees on fire suppression		1,467
4. Casual employees hired for first time (included in Item 3)	409	
5. **GRAND TOTAL** (1e, 2d, 3)		5,781

61 YEAR FIRE STATISTICS

	YEAR	LIGHTNING FIRES	HUMAN FIRES	TOTAL FIRES	CLASS A	CLASS B	CLASS C	CLASS D	CLASS E	ACRES BURNED LIGHTNING	HUMAN	TOTAL
1	1930	602	354	956	637	192	79	20	28	67,106	29,778	96,884
2	1931	664	451	1115	724	256	84	19	32	97,854	31,814	129,668
3	1932	264	252	516	346	124	26	12	8	6,417	8,872	15,289
4	1933	303	266	569	308	157	86	7	11	9,147	20,466	29,613
5	1934	599	307	906	519	250	102	14	21	26,394	79,290	105,684
6	1935	548	327	875	592	139	98	19	27	25,646	22,942	48,588
7	1936	617	259	876	661	145	41	5	24	21,309	26,267	47,576
8	1937	573	336	909	714	142	47	2	4	3,745	5,417	9,162
9	1938	1025	458	1483	1246	182	39	6	10	3,854	16,612	20,466
10	1939	816	374	1190	822	218	128	8	14	12,955	21,710	34,665
11	1940	888	431	1319	864	310	91	21	33	26,512	45,985	72,497
12	1941	399	137	536	417	70	30	11	8	1,165	6,685	7,850
13	1942	489	243	732	487	146	62	16	21	22,302	46,729	69,031
14	1943	392	165	557	381	118	35	9	14	12,145	9,483	21,628
15	1944	363	245	608	388	123	48	20	29	4,445	34,131	38,626
16	1945	276	127	403	271	82	28	11	11	27,957	6,894	34,851
17	1946	577	261	838	609	162	40	15	12	3,465	14,194	17,659
18	1947	471	228	699	427	176	46	18	32	23,649	63,158	86,807
19	1948	261	293	554	349	121	49	17	18	8,174	30,459	38,633
20	1949	687	198	885	656	178	23	10	18	37,652	15,303	52,955
21	1950	415	183	598	420	129	35	8	6	2,444	5,916	8,360
22	1951	401	188	589	437	99	36	8	9	2,473	6,432	8,905
23	1952	355	295	650	468	143	28	6	5	494	3,816	4,310
24	1953	647	257	904	672	175	39	10	8	3,941	3,703	7,644
25	1954	430	232	662	785	124	40	6	7	634	6,246	6,880
26	1955	359	156	515	408	77	22	5	3	1,158	9,703	10,861
27	1956	621	266	887	634	197	32	16	8	3,154	4,486	7,640
28	1957	515	167	682	514	123	29	5	11	6,504	21,805	28,309
29	1958	647	374	1021	765	172	57	15	12	2,339	8,098	10,437
30	1959	566	254	820	624	134	31	12	19	7,697	5,541	13,238
31	1960	721	344	1065	767	200	53	25	20	25,264	22,063	47,327
32	1961	804	235	1039	812	145	45	16	21	11,801	30,234	42,035
33	1962	719	324	1043	811	163	49	16	4	1,739	5,651	7,390
34	1963	804	242	1046	814	170	45	8	9	6,065	3,701	9,766
35	1964	484	403	887	668	166	26	16	11	13,956	11,808	25,764
36	1965	384	154	538	426	85	22	4	1	722	1,257	1,979
37	1966	1011	329	1340	1012	232	50	21	25	52,142	9,232	61,374
38	1967	747	142	889	741	125	19	3	1	965	675	1,640
39	1968	687	176	863	694	128	28	7	6	3,254	2,382	5,636
40	1969	485	207	692	578	91	21	1	1	1,448	562	2,010
41	1970	788	231	1019	833	146	35	2	3	793	2,902	3,695
42	1971	604	350	954	756	145	38	7	8	2,505	9,187	11,692
43	1972	1233	333	1566	1264	239	47	7	9	12,111	3,122	15,233
44	1973	787	370	1157	953	162	23	8	11	4,037	4,821	8,858
45	1974	572	523	1095	859	176	41	9	10	4,294	12,806	17,100
46	1975	608	298	906	767	122	15	1	1	724	798	1,522
47	1976	657	424	1081	897	138	31	7	8	3,072	4,338	7,410
48	1977	885	332	1217	987	185	32	5	8	3,048	11,643	15,141
49	1978	528	419	947	755	150	27	9	6	3,615	3,625	7,240
50	1979	684	534	1218	958	203	36	5	15	52,876	87,416	140,292
51	1980	557	312	869	716	118	19	7	9	1,093	11,631	12,724
52	1981	865	412	1277	963	223	47	15	29	91,127	47,411	138,535
53	1982	459	220	679	533	122	17	4	3	552	2,164	2,716
54	1983	374	170	544	429	78	23	7	7	1,795	4,634	6,429
55	1984	525	167	692	584	85	12	5	6	2,436	31,341	33,777
56	1985	652	284	936	715	156	42	6	17	104,141	6,737	110,878
57	1986	876	216	1092	665	314	64	15	14	80,621	16,852	97,473
58	1987	665	321	986	653	242	46	13	32	70,977	38,141	109,118
59	1988	773	380	1153	668	338	76	23	48	362,604	187,577	550,181
60	1989	1383	255	1638	971	519	71	16	10	159,740	16,402	176,142
61	1990	1031	258	1289	884	330	37	16	12	22,822	13,093	35,915